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No.151
ABSTRACTS

WILDLIFE REVIEW

NUMBER 151 DECEMBER 1973

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF SPORT FISHERIES AND WILDLIFE

WILDLIFE REVIEW

An abstracting service for wildlife management
Issued for the information of cooperators
by the Bureau of Sport Fisheries and Wildlife
Fish and Wildlife Service
UNITED STATES DEPARTMENT OF THE INTERIOR

December 1973 Patuxent Wildlife Research Center, Laurel, Md. 20810 No. 151

Use of funds for printing this publication approved
by the Director of the Bureau of the Budget, December 1, 1970.

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SOILS

Bowman, Roy H., and others. SOIL SURVEY OF THE SAN DIEGO AREA, CALIFORNIA. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* Part I. i + 104 p., 8 figs.; Part II. i + 118 p., illus. With a separate map packet of folded maps based on aerial photos. Dec. 1973. *WR 151: 2*

Brent, Floyd V., Jr., and Leland C. Murphree. SOIL SURVEY OF OKTIBBEHA COUNTY, MISSISSIPPI. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 94 p., 9 figs. + single-fold maps based on aerial photos and bound in. 9 July 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

Cockerham, Warren L., and others. SOIL SURVEY OF ST. JAMES AND ST. JOHN THE BAPTIST PARISHES, LOUISIANA. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 46 p., 5 figs. + single-fold maps based on aerial photos and bound in. Aug. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

Cummins, Joseph F., and others. SOIL SURVEY OF STEELE COUNTY, MINNESOTA. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 102 p., 14 figs. + single-fold maps based on aerial photos and bound in. Aug. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

Dixon, Marvin L., and others. SOIL SURVEY OF SCURRY COUNTY, TEXAS. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 56 p., 15 figs. + single-fold maps based on aerial photos and bound in. Oct. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

Hall, Richard L., and others. SOIL SURVEY OF WORCESTER COUNTY, MARYLAND. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 78 p., 17 figs. + single-fold maps based on aerial photos and bound in. May 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

Jordan, Dan H., and others. SOIL SURVEY OF CHEROKEE, GILMER, AND PICKENS COUNTIES, GEORGIA. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 73 p., 11 figs. + single-fold maps based on aerial photos and bound in. Sept. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

McEwen, Harry F., and others. SOIL SURVEY OF COLLINGSWORTH COUNTY, TEXAS. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 56 p., 20 figs. + single-fold maps based on aerial photos and bound in. Aug. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

Pearson, Carl S., and others. SOIL SURVEY OF CHEMUNG COUNTY, NEW YORK. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 100 p., 12 figs. + single-fold maps based on aerial photos and bound in. Sept. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 2*

SOILS--Continued

Roth, William E. SOIL SURVEY OF EDWARDS COUNTY, KANSAS. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 64 p., 12 figs. + single-fold maps based on aerial photos and bound in. Sept. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 3*

Weber, Hermann L. SOIL SURVEY OF LEELANAU COUNTY, MICHIGAN. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 90 p., 13 figs. + single-fold maps based on aerial photos and bound in. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 3*

Weisenberger, B. C., and others. SOIL SURVEY OF BOONE, CAMPBELL, AND KENTON COUNTIES, KENTUCKY. *U.S. Dep. Agric. Soil Conserv. Serv. Soil Surv.* i + 67 p., 11 figs. + single-fold maps based on aerial photos and bound in. Aug. 1973. For sale by Supt. Documents, GPO, Washington, D.C. *WR 151: 3*

GENERAL CONSERVATION

Boden, R. W., and J. D. Ovington. RECREATION USE-PATTERNS AND THEIR IMPLICATIONS FOR MANAGEMENT OF CONSERVATION AREAS. *Biol. Conserv.* 5(4): 265-270, 5 figs. Oct. 1973. *WR 151: 3*
[Dep. Environment & Conservation, Canberra, Australia.]

Crusz, Hilary. NATURE CONSERVATION IN SRI LANKA (CEYLON). *Biol. Conserv.* 5 (3): 199-208, 1 fig. July 1973. *WR 151: 3*
[Univ. Sri Lanka, Peradeniya, Sri Lanka (Ceylon).]

Haber, Wolfgang. CONSERVATION AND LANDSCAPE MAINTENANCE IN GERMANY: PAST, PRESENT, AND FUTURE. *Biol. Conserv.* 5(4): 258-264. Oct. 1973. *WR 151: 3*
[Tech. Univ. Munich, Munich, Germany.]

Lovari, Sandro. SHOOTING AND THE PRESERVATION OF WILDLIFE IN ITALY. *Biol. Conserv.* 5(3): 235-236, 1 fig. July 1973. *WR 151: 3*
[Univ. Siena, Siena, Italy.]

Simmons, I. G. THE PROTECTION OF ECOSYSTEMS AND LANDSCAPES IN HOKKAIDO, JAPAN. *Biol. Conserv.* 5(4): 281-289, 3 figs. Oct. 1973. *WR 151: 3*
[Univ. Durham, Durham, England.]

CONSERVATION EDUCATION

Frye, Roy G. WILDLIFE-ORIENTED RECREATIONAL OPPORTUNITIES ON PUBLIC SCHOOL LAND IN PAYNE COUNTY, OKLAHOMA. *M.S. thesis, Okla. State Univ.* ix + 110 p., 6 figs. Dec. 1973. *WR 151: 3*
Courtesy/ James C. Lewis.

BIBLIOGRAPHIES, DIRECTORIES, BIOGRAPHY, HISTORY

Kilham, Lawrence. EDWARD JENNER, PIONEER STUDENT OF TWO MAJOR ORNITHOLOGICAL PROBLEMS. *Auk* 90(4): 752-758. Oct. 1973. *WR 151: 3*
[Dartmouth Med. School, Hanover, N.H.] A tribute to a naturalist of the eighteenth and early nineteenth century who did pioneer research on bird migration and social parasitism in birds.--Courtesy/ Paul A. Stewart.

Thompson, June W., and Grace Hickling. A BIBLIOGRAPHY OF THE LITERATURE OF THE FARNE ISLANDS, NORTHUMBERLAND. *Trans. Nat. Hist. Soc. Northumberland Durham & Newcastle upon Tyne* 42(1). 64 p., 12 figs. + 3 pls. July 1973. Price £2.00. *WR 151: 3*
A classified annotated list of 598 items of which nos. 238-520 deal with birds and seals. In addition, there are three items classified under miscellany dealing with rabbits and bats.

WILDLIFE--BIOTAS, ECOLOGY, NATURAL HISTORY

Abaturov, B. C. THE ROLE OF BURROWING ANIMALS IN THE TRANSPORT OF MINERAL SUBSTANCES IN THE SOIL. *Pedobiologia* 12(4): 261-266. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 4*

Anderson, G. D., and D. J. Herlocker. SOIL FACTORS AFFECTING THE DISTRIBUTION OF THE VEGETATION TYPES AND THEIR UTILIZATION BY WILD ANIMALS IN NGORONGORO CRATER, TANZANIA. *J. Ecol.* 61(3): 627-651, 2 figs. Nov. 1973. *WR 151: 4*
[Makerere Univ., Kampala, Uganda.] Ngorongoro Crater in Tanzania, a caldera some 20 km across, is well known for its exceptionally large and varied population of permanently resident game animals. This remarkable population is associated with a variety of vegetation types. This paper describes the major soil groups of the caldera and demonstrates the strong influence of these on the vegetation types, so illustrating in turn the dependence of the animal population on the diversity of soils. Utilization of vegetation seems to be dependent on palatability, stickiness of the soils when wet, seasonal behavior of game and cover for predators. The seasonal grass production and grazing sequence ensure that a reasonable supply of fodder is nearly always available. This makes possible the large, varied and essentially non-migratory animal population.--From summ.

Dasmann, Raymond F., John P. Milton, and Peter H. Freeman. ECOLOGICAL PRINCIPLES FOR ECONOMIC DEVELOPMENT. *Published for The International Union for Conservation of Nature and Natural Resources (IUCN), Morges, Switzerland and the Conservation Foundation, Washington, D.C., by John Wiley & Sons* (London-New York-Sydney-Toronto). ix + 252 p., 31 figs., 6 x 9 in. 1973. $5.00, paper. *WR 151: 4*
"*Ecological Principles for Economic Development* provides guidance to development planners and decision makers who wish to avoid such mistakes in future development projects. The authors explore pertinent interrelationships between development and conservation and demonstrate that both must be based on an understanding of ecology. Particular emphasis is placed on ecosystems which are currently subject to heavy developmental pressure: tropical humid forests, savannas and grasslands in tropical, sub-tropical and mediterranean regions, high mountains, coastal area and islands. Various contemporary problems likely to arise from irrigation and major river basin development, from forestry, livestock and agricultural projects and, in a rather different way, from the promotion of tourism are all reviewed."

Geerling, C., and J. Bokdam. FAUNA OF THE COMOÉ NATIONAL PARK, IVORY COAST. *Biol. Conserv.* 5(4): 251-257, 1 fig. Oct. 1973. *WR 151: 4*
[Univ. Ibadan, Ibadan, Nigeria.]

Turček, F. ECOLOGICAL STUDIES OF BIRDS AND MAMMALS ON MAT-GRASSLANDS. *Ekol. Polska* 20(34): 441-461. 1972. [From Bird-Banding 44(3), 1973. In English with Czech summ.] *WR 151: 4*

Vuilleumier, Francois. RAPPORTS ENTRE L'ÉCOLOGIE ET LA GÉNÉTIQUE DES POPULATIONS. [RELATION BETWEEN ECOLOGY AND GENETICS OF POPULATIONS.] *Terre Vie* 1973(2): 179-231, 8 figs. Apr.-June 1973. In French with English summ. *WR 151: 4*
[Stn. Biol. Marine, Roscoff, France.]

WILDLIFE--NATURAL AREAS & REFUGES

Jenkins, Robert E., and W. Brian Bedford. THE USE OF NATURAL AREAS TO ESTABLISH ENVIRONMENTAL BASELINES. *Biol. Conserv.* 5(3): 168-174. July 1973. *WR 151: 4*
[Nature Conservancy, 1800 North Kent St., Arlington, Va.]

WILDLIFE--MORPHOLOGY, PHYSIOLOGY, BEHAVIOR, MIGRATION

Nottebohm, Fernando. THE ORIGINS OF VOCAL LEARNING. *Am. Nat.* 106(947): 116-140. Jan.-Feb. 1972. *WR 151: 5*

[Rockefeller Univ., New York, N.Y.] Summary: Facts and theories on the evolution of vocal learning in mammals and birds are reviewed. An attempt is made to articulate principles of general heuristic importance. Different contexts in which vocal learning occurs are evaluated. It is concluded that maximal stimulation of females and benefits accruing from formation of vocal dialects have been selective pressures leading to vocal learning. Correlations between intense speciation and vocal learning, and between long-lasting pair bonds and filial song learning, need further study. In all cases where selective pressures leading to vocal learning have been identified, females are the selective agent. Use of vocal signals to attract females is much rarer in mammals, and this is correlated with a low incidence of vocal learning. The successive steps leading from genetically determined motor ontogenies to vocal learning are discussed.

WILDLIFE--POLLUTION

Addison, R. F., and P. F. Brodie. OCCURRENCE OF DDT RESIDUES IN BELUGA WHALES *(DELPHINAPTERUS LEUCAS)* FROM THE MACKENZIE DELTA, N.W.T. *J. Fish. Res. Board Can.* 30(11): 1733-1736. Nov. 1973. In English with French summ. *WR 151: 5*

[Bedford Inst. Oceanogr., Dartmouth, Nova Scotia, Canada.] Abstract: Tissues of Beluga whales *(Delphinapterus leucas)* sampled from a transient herd off the Mackenzie Delta, N.W.T., contained residues of the DDT pesticide group. Muscle and liver contained *p,p'*-DDE and *p,p'*-DDT; total residue concentrations in these tissues were approximately 0.01 and 0.02 ppm fresh weight, respectively. Blubber contained *p,p'*-DDE, *p,p'*-DDT, and *o,p'*-DDT; total residue content was approximately 2-4 ppm fresh weight.

Addison, R. F., S. R. Kerr, J. Dale, and D. E. Sergeant. VARIATION OF ORGANOCHLORINE RESIDUE LEVELS WITH AGE IN GULF OF ST. LAWRENCE HARP SEALS *(PAGOPHILUS GROENLANDICUS)*. *J. Fish. Res. Board Can.* 30(5): 595-600, 1 fig. May 1973. In English with French summ. *WR 151: 5*

[Bedford Inst. Oceanogr., Dartmouth, Nova Scotia, Canada.]

Allen, J. R., and L. J. Abrahamson. MORPHOLOGICAL AND BIOCHEMICAL CHANGES IN THE LIVER OF RATS FED POLYCHLORINATED BIPHENYLS. *Arch. Environ. Contam. Toxicol.* 1(3): 265-280, 5 figs. Oct. 1973. *WR 151: 5*

[Univ. Wis., Madison.]

Aulerich, R. J., R. K. Ringer, and D. Polin. RATE OF ACCUMULATION OF CHLORINATED HYDROCARBON PESTICIDE RESIDUES IN ADIPOSE TISSUE OF MINK. *Can. J. Zool.* 50 (9): 1167-1173, illus. 1972. [From Biol. Abstr. 56(6), 1973. In English with French summ.] *WR 151: 5*

[Mich. State Univ., East Lansing.]

Benson, W. W., Michael Watson, and Joe Wyllie. ORGANOCHLORINE RESIDUES IN WILD MOOSE, IDAHO--1972. *Pestic. Monit. J.* 7(2): 97-99. Sept. 1973. *WR 151: 5*

[Idaho Dep. Environ. & Community Serv., Statehouse, Boise.] Abstract: In 1972, samples of adipose tissue from 14 moose, *Alces alces shirasi*, from the Targhee National Forest in eastern Idaho were analyzed by gas-liquid chromatography for organochlorine residues. Residues detected and respective mean levels for each were: *p,p'*-DDT, 52.3 ppb; *p,p'*-DDE, 28.9 ppb; *p,p'*-DDD, 53.0 ppb; α-BHC, 77.5 ppb; and dieldrin, 5.0 ppb. The presence of significant BHC levels in these animals probably reflects the prior use of BHC within the forest for control of pine bark beetle infestation.

Bitman, Joel, Helene C. Cecil, and Susan J. Harris. BIOLOGICAL EFFECTS OF POLYCHLORINATED BIPHENYLS IN RATS AND QUAIL. *Environ. Health Perspect. Exp. Issue* no. 1. p. 145-149, 7 figs. Apr. 1972. *WR 151: 5*

[Agric. Res. Stn., Beltsville, Md.]

Bowes, Gerald W., Berndt R. Simoneit, A. L. Burlingame, Brock W. de Lappe, and Robert W. Risebrough. THE SEARCH FOR CHLORINATED DIBENZOFURANS AND CHLORINATED DIBENZODIOXINS IN WILDLIFE POPULATIONS SHOWING ELEVATED LEVELS OF EMBRYONIC DEATH. *Environ. Health Perspect. Exp. Issue* no. 5. p. 191-198, 2 figs. Sept. 1973. *WR 151: 6*
[Canadian Wildl. Serv., Ottawa, Ontario, Canada.]

Braham, Howard W. LEAD IN THE CALIFORNIA SEA LION *(ZALOPHUS CALIFORNIANUS)*. *Environ. Pollut.* 5(4): 253-258. Dec. 1973. *WR 151: 6*
[Ohio State Univ., Columbus.] Abstract: Atomic absorption spectrophotometric analysis was conducted on tissue samples taken from nineteen organs in the California sea lion, *Zalophus californianus*, to determine the distribution and concentration of the heavy metal lead. Lead was found to be accumulated in significantly higher concentrations in hard tissue, bone and teeth, than in soft tissue such as fat and muscle. These results are comparable with those found in man, suggesting that exposure levels of lead may be similar for terrestrial and coastal environmental communities.

Briggs, D. M., and J. R. Harris. POLYCHLORINATED BIPHENYLS INFLUENCE ON HATCHABILITY. *Poultry Sci.* 52(4): 1291-1294, 2 figs. July 1973. *WR 151: 6*
[N.C. State Univ., Raleigh.]

Bunyan, P. J., and J. M. J. Page. PESTICIDE-INDUCED CHANGES IN HEPATIC MICROSOMAL ENZYME SYSTEMS: SOME EFFECTS OF 1,1-di(*p*-CHLOROPHENYL)-2-CHLOROETHYLENE (DDMU) IN THE RAT AND JAPANESE QUAIL. *Chem.-Biol. Interactions* 6(4): 249-257. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 6*
[Pest Infest. Control Lab., Min. Agric. Fish & Food, Tolworth, Surbiton, Surrey, England.]

Chen, P. R., H. M. Mehendale, and L. Fishbein. EFFECT OF TWO ISOMERIC TETRACHLOROBIPHENYLS ON RATS AND THEIR HEPATIC ENZYMES. *Arch. Environ. Contam. Toxicol.* 1(1): 36-47, 1 fig. Feb. 1973. *WR 151: 6*

Coggin, Joe L., and Hal W. Myers, Jr. GAME BIRDS AND PESTICIDES. *Va. Wildl.* 34(12): 8-9. Dec. 1973. *WR 151: 6*

Cooke, A. S. THE EFFECTS OF DDT, WHEN USED AS A MOSQUITO LARVICIDE, ON TADPOLES OF THE FROG *RANA TEMPORARIA*. *Environ. Pollut.* 5(4): 259-273. Dec. 1973. *WR 151: 6*
[Monks Wood Exp. Stn., Abbots Ripton, Huntingdon, England.]

Cooke, A. S. RESPONSE OF *RANA TEMPORARIA* TADPOLES TO CHRONIC DOSES OF pp'-DDT. *Copeia* 1973(4): 647-652, 1 fig. 31 Dec. 1973. *WR 151: 6*
[Monks Wood Exp. Stn., Abbots Ripton, Huntingdon, England.] Abstract: Tadpoles (*Rana temporaria* L.) were maintained in concentrations of 0.0001 or 0.001 ppm pp'-DDT from the end of the external gill stage until the appearance of the front legs. Slight hyperactivity was noted amongst tadpoles in 0.001 ppm DDT. During the final few days of treatment, tadpoles exposed to the lower level of DDT developed more quickly than the controls. In addition, during tail resorption after treatment had finished there was a significant positive relationship between development rate and the severity of prior exposure to DDT. DDT residues accumulated during chronic dosing caused neither mortality nor obvious effects on behaviour at body levels of 2-5 ppm. After acute exposure, tissue levels of 2 ppm or less can cause hyperactivity in tadpoles and death in small frogs. Differences in response to acute and chronic dosing are probably related to the extent of storage of residues in fatty tissue. Several treated tadpoles had lateral kinks at the base of the spine and two also had permanently extended left legs.

Dahlgren, Robert B., Raymond L. Lindert, and C. W. Carlson. POLYCHLORINATED BIPHENYLS: THEIR EFFECTS ON PENNED PHEASANTS. *Environ. Health Perspect. Exp. Issue* no. 1. p. 89-101. Apr. 1972. *WR 151: 7*
[S. Dak. Coop. Wildl. Res. Unit, Brookings.] *"Phasianus colchicus."*

Deichmann, William B., editor. PESTICIDES AND THE ENVIRONMENT: A CONTINUING CONTROVERSY / CHRONIC TOXICOLOGY; ECOLOGICAL EFFECTS; CARCINOGENESIS; MUTAGENESIS; TERATOGENESIS; DRUG INTERACTIONS. *Intercontinental Medical Book Corp.* (New York & London). xiii + 578 p., illus. 1973. *WR 151: 7*
"The [48] papers in this volume constitute a desirable and informative summary of the chronic toxicity of pesticides, primarily the organochlorines, DDT, aldrin, and dieldrin. Studies are described which implicate the organochlorine and organophosphate pesticides in contributing to the pollution of our environment." The following papers deal with wild vertebrates other than fish and are listed in this issue of *Wildlife Review: Seasonal changes in the sensitivity of bats to DDT*, Mark M. Luckens; *Reproduction and related residues in birds fed mirex*, Robert G. Heath and James W. Spann; and *Toxicity and persistence of mirex in birds*, William H. Stickel, John A. Galyen, Russell A. Dyrland, and Donald L. Hughes.

Edwards, C. A. ENVIRONMENTAL POLLUTION BY PESTICIDES. *Plenum Press* (London & New York). ix + 542 p., illus., 6 x 9.25 in. 1973. *WR 151: 7*
"An attempt to bring together the available data on pesticide residues, not only in plants and animals, but also in air, water and soil, each chapter being written by a recognized authority in his or her field. Wherever possible, information is provided in each chapter on the following aspects: the amounts of residues commonly occurring, the principal sources of the residues, factors influencing the persistence of the residues, hazards caused by the residues, methods of minimizing or removing residues from the environment and possible further investigations."

Enderson, James H., and Peter H. Wrege. DDE RESIDUES AND EGGSHELL THICKNESS IN PRAIRIE FALCONS. *J. Wildl. Manage.* 37(4): 476-478, 1 fig. Oct. 1973. *WR 151: 7*
[Colo. Coll., Colorado Springs.] Abstract: The eggshell thickness of prairie falcon *(Falco mexicanus)* eggs collected in Colorado in 1967-68, and 1972, is related linearily and inversely to the logarithms of the DDE content of the eggs. This relationship is not statistically different from that found in peregrine falcons *(F. peregrinus)* and brown pelicans *(Pelecanus occidentalis)*. DDE levels in prairie falcon eggs are about one-fifth and one-sixteenth those shown in Alaskan peregrine eggs and California brown pelican eggs, respectively, and despite some shell thinning, prairie falcons in Colorado are reproducing well. Shell thickness averaged higher, egg DDE residues lower, and hatch rate was greater in 1972 than in 1967-68 in the prairie falcons, but the differences are not significant.

Fleet, Robert R., Donald R. Clark, Jr., and Frederick W. Plapp, Jr. RESIDUES OF DDT AND DIELDRIN IN SNAKES FROM TWO TEXAS AGRO-SYSTEMS. *BioScience* 22(11): 664-665, 1 fig. Nov. 1972. *WR 151: 7*
[Tex. A&M Univ., College Station.]

Fletcher, Milford Robert. EFFECTS OF HEXACHLOROBENZENE ON JAPANESE QUAIL *(COTURNIX COTURNIX JAPONICA)*. *Ph.D. thesis, Wash. State Univ.* 51 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(6), 1973.] *WR 151: 7*

Forsyth, D. J., and T. J. Peterle. ACCUMULATION OF CHLORINE-36 RING-LABELED DDT RESIDUES IN VARIOUS TISSUES OF TWO SPECIES OF SHREW. *Arch. Environ. Contam. Toxicol.* 1(1): 1-17, 3 figs. Feb. 1973. *WR 151: 7*
[Ohio State Univ., Columbus.] *"Blarina brevicauda* and *Sorex cinereus."*

Frank, R., K. Ronald, and H. E. Braun. ORGANOCHLORINE RESIDUES IN HARP SEALS *(PAGOPHILUS GROENLANDICUS)* CAUGHT IN EASTERN CANADIAN WATERS. *J. Fish. Res. Board Can.* 30(8): 1053-1063. Aug. 1973. In English with French summ. *WR 151: 8*
[Ontario Min. Agric. & Food, Guelph, Ontario, Canada.]

Gardiner, E. E. DIFFERENCES BETWEEN DUCKS, PHEASANTS, AND CHICKENS IN TISSUE MERCURY RETENTION, DEPLETION, AND TOLERANCE TO INCREASING LEVELS OF DIETARY MERCURY. *Can. J. Anim. Sci.* 52(2): 419-423. 1972. [From Biol. Abstr. 56(7), 1973. In English with French summ.] *WR 151: 8*
[Res. Stn., Can. Agric., Lethbridge, Alberta, Canada.]

Gissel-Nielsen, G., and M. Gissel-Nielsen. ECOLOGICAL EFFECTS OF SELENIUM APPLICATION TO FIELD CROPS. *Ambio* 2(4): 114-117, 3 figs. 1973. *WR 151: 8*
[Danish Atomic Energy Commission, Roskilde, Denmark.] Includes data for *Clethrionomys glareolus* and *Phasianus colchicus.*

Gochfeld, Michael. EFFECT OF ARTEFACT POLLUTION ON THE VIABILITY OF SEABIRD COLONIES ON LONG ISLAND, NEW YORK. *Environ. Pollut.* 4(1): 1-6. Jan. 1973. *WR 151: 8*
[Am. Mus. Nat. Hist., New York, N.Y.]

Heath, Robert G., and James W. Spann. REPRODUCTION AND RELATED RESIDUES IN BIRDS FED MIREX. Reprint from *Pesticides and the Environment* (William B. Deichmann, editor). p. 421-435. 1973. *WR 151: 8*
[Patuxent Wildl. Res. Cent., Laurel, Md.] *"Colinus virginianus* and *Anas platyrhynchos."*

Hyde, Kenneth M., Jerry B. Graves, Alva B. Watts, and Frances L. Bonner. REPRODUCTIVE SUCCESS OF MALLARD DUCKS FED MIREX. *J. Wildl. Manage.* 37(4): 479-484. Oct. 1973. *WR 151: 8*
[Mount Vernon Nazarene Coll., Mount Vernon, Ohio.] Mirex (a polycyclic organochlorine) bait was incorporated in rations at 0, 1, and 100 ppm and fed to mallards *(Anas platyrhynchos)* for 25 weeks. Comparative measurements were obtained on egg production, shell thickness, shell weight, embryonation, hatchability, and duckling survival.--From abstr.

Il'enko, A. I., and A. D. Pokarzhevskii. [EFFECT OF BIOCOENOTIC CONDITIONS ON STRONTIUM-90 CONCENTRATION IN SMALL MAMMALS.] *Zool. Zh.* 51(8): 1219-1224, illus. 1972. [From Biol. Abstr. 56(8), 1973. In Russian with English summ.] *WR 151: 8*
[Inst. Anim. Evol. Morphol. Ecol., Acad. Sci. USSR, Moscow, USSR.]

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[Univ. Utrecht, Utrecht, Netherlands.]

Konat, G., and J. Clausen. THE CYTOCHROME P-450 COMPLEX AND ESTERASE OF THE LIVER AND BRAIN IN LINDANE, AROCLOR 1254 AND DDT-INDUCED INTOXICATION OF THE MOUSE. *Environ. Physiol. Biochem.* 3(3): 139-147. 1973. *WR 151: 8*
[Neurochemical Inst., 58 Rådmandsgade, Copenhagen, Denmark.]

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[Agric. Res. Serv., USDA, Mississippi State, Miss.] *"Coturnix coturnix japonica."*

Luckens, Mark M. SEASONAL CHANGES IN THE SENSITIVITY OF BATS TO DDT. Reprint from *Pesticides and the Environment* (William B. Deichmann, editor). p. 63-75. 1973. *WR 151: 9*
[Univ. Ky. Med. Cent., Lexington.]

Lundberg, C. EFFECTS OF LONG-TERM EXPOSURE TO DDT ON THE OESTRUS CYCLE AND THE FREQUENCY OF IMPLANTED OVA IN THE MOUSE. *Environ. Physiol. Biochem.* 3(3): 127-131. 1973. *WR 151: 9*
[Inst. Zoophysiol., Uppsala, Sweden.]

McLane, M. A. R., Lucille F. Stickel, Eldon R. Clark, and Donald L. Hughes. ORGANOCHLORINE RESIDUES IN WOODCOCK WINGS, 11 STATES--1970-71. *Pestic. Monit. J.* 7(2): 100-103, 3 figs. Sept. 1973. *WR 151: 9*
[Patuxent Wildl. Res. Cent., Laurel, Md.] Abstract: A survey of organochlorine residues in woodcock wings was undertaken to determine whether these wings are suitable for showing regional differences in residues and to obtain a baseline in 1970-71 for later comparisons. Woodcock wings were obtained from the annual hunter's wing survey. Samples came from eight States (Louisiana, Maine, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, and Wisconsin) and one tri-State area (North Carolina, South Carolina, and Georgia). Wings from the tri-State area contained significantly higher ($P < 0.01$) concentrations of DDT (including DDT, DDD, and DDE) than those from other States. Concentrations of polychlorinated biphenyls (PCB's) also were significantly higher ($P < 0.05$) in samples from these three States. Wings from Louisiana and the tri-State area had significantly higher ($P < 0.01$) concentrations of dieldrin than wings from the other States, and those from Louisiana had significantly higher ($P < 0.01$) concentrations of mirex than those from other States.

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Naviaux, James L., and Allen Pittman. CLEANING OF OIL-COVERED BIRDS. *Biol. Conserv.* 5(4): 292-294, 1 fig. Oct. 1973. *WR 151: 9*
[Natl. Wildl. Health Foundation, 450 Boyd Road, Pleasant Hill, Calif.]

Örberg, J., N. Johansson, J. E. Kihlström, and C. Lundberg. ADMINISTRATION OF DDT AND PCB PROLONGS OESTROUS CYCLE IN MICE. *Ambio* 1(4): 148-149, 2 figs. Aug. 1972. *WR 151: 9*
[Univ. Uppsala, Uppsala, Sweden.]

Örberg, J., and J. E. Kihlström. EFFECTS OF LONG-TERM FEEDING OF POLYCHLORINATED BIPHENYLS (PCB, CLOPHEN A 60) ON THE LENGTH OF THE OESTROUS CYCLE AND ON THE FREQUENCY OF IMPLANTED OVA IN THE MOUSE. *Environ. Res.* 6(2): 176-179. June 1973. *WR 151: 9*
[Inst. Zoophysiol., Uppsala, Sweden.]

Parslow, J. L. F. MERCURY IN WADERS FROM THE WASH. *Environ. Pollut.* 5(4): 295-305, 1 fig. Dec. 1973. *WR 151: 9*
[Monks Wood Exp. Stn., Abbots Ripton, Huntingdon, England.] Concentrations of total mercury were determined in the livers of seventy-three waders (Limicolae) collected during August-March on the Wash, eastern England, in order to

obtain baseline data on levels of this element in birds living in a non-industrial and presumably lightly polluted estuarine area. The biological significance of the concentrations found in the Wash waders is uncertain, but it is suggested that in industrial estuaries mercury levels in the same species may be very much higher and, by analogy with other species, could be having detrimental physiological effects.--From abstr.

Parslow, J. L. F., and D. J. Jefferies. RELATIONSHIP BETWEEN ORGANOCHLORINE RESIDUES IN LIVERS AND WHOLE BODIES OF GUILLEMOTS. *Environ. Pollut.* 5(2): 87-101, 2 figs. Sept. 1973. *WR 151: 10*
[Monks Wood Exp. Stn., Abbots Ripton, Huntingdon, England.]

Peakall, David B., Jeffery L. Lincer, and Stephen E. Bloom. EMBRYONIC MORTALITY AND CHROMOSOMAL ALTERATIONS CAUSED BY AROCLOR 1254 IN RING DOVES. *Environ. Health Perspect. Exp. Issue* no. 1. p. 103-104. Apr. 1972. *WR 151: 10*
[Cornell Univ., Ithaca, N.Y.] *"Streptopelia risoria."*

Peakall, David B., and M. Lavonne Peakall. EFFECT OF A POLYCHLORINATED BIPHENYL ON THE REPRODUCTION OF ARTIFICIALLY AND NATURALLY INCUBATED DOVE EGGS. *J. Appl. Ecol.* 10(3): 863-868, 2 figs. Dec. 1973. *WR 151: 10*
[Cornell Univ., Ithaca, N.Y.] *"Streptopelia risoria."*

Persson, B. DDT CONTENT OF WHITETHROATS LOWER AFTER SUMMER STAY IN SWEDEN. *Ambio* 1(1): 34-35, 2 figs. Feb. 1972. *WR 151: 10*
[Univ. Lund, Lund, Sweden.] *"Sylvia communis."*

Platonow, N. S., and L. H. Karstad. DIETARY EFFECTS OF POLYCHLORINATED BIPHENYLS ON MINK. *Can. J. Comp. Med.* 37(4): 391-400, 7 figs. Oct. 1973. *WR 151: 10*
[Univ. Guelph, Guelph, Ontario, Canada.]

Poonacha, K. B., B. C. Wentworth, and A. B. Chapman. GENETIC RESISTANCE TO DDT IN THE JAPANESE QUAIL *COTURNIX COTURNIX JAPONICA*. *Poultry Sci.* 52(3): 841-846, 1 fig. May 1973. *WR 151: 10*
[Univ. Wis., Madison.]

Risebrough, Robert W., and Brock de Lappe. ACCUMULATION OF POLYCHLORINATED BIPHENYLS IN ECOSYSTEMS. *Environ. Health Perspect. Exp. Issue* no. 1. p. 39-45. Apr. 1972. *WR 151: 10*
[Bodega Marine Lab., P.O. Box 247, Bodega Bay, Calif.] Includes data on petrels, shearwaters, and pelicans.

Rogers, Andrew J. EAGLES, AFFLUENCE, AND PESTICIDES. *Mosq. News* 32(2): 151-157. 1972. [From Biol. Abstr. 56(9), 1973.] *WR 151: 10*
[West Fla. Arthropod Res. Lab., Panama City.] Published records of important factors, shooting, bird and egg collecting, encroachment of suburbia on former eagle habitat, poison baits, electrocution and molesting nesting birds and other adverse effects on the eagle population of the USA are discussed. Some of these factors existed before the advent of persistent pesticides. The question of forsaking the benefits of pesticides, e.g., protecting against disease and increased food production for starving populations, is discussed.

Rothstein, Stephen I. PLASTIC PARTICLE POLLUTION OF THE SURFACE OF THE ATLANTIC OCEAN: EVIDENCE FROM A SEABIRD. *Condor* 75(3): 344-345, 1 fig. Autumn 1973. *WR 151: 10*
[Univ. Calif., Santa Barbara.] Of 21 Leach's petrels *(Oceanodroma leucorhoa)* examined, seven contained in their digestive tracts pieces of plastic picked up in oceanic foraging.--Courtesy/ Paul A. Stewart.

Sergeant, D. E., and F. A. J. Armstrong. MERCURY IN SEALS FROM EASTERN CANADA. *J. Fish. Res. Board Can.* 30(6): 843-846. June 1973. In English with French summ. *WR 151: 11*
[Arctic Biol. Stn., Ste. Anne de Bellevue, Quebec, Canada.] *"Pagophilus groenlandicus, Halichoerus grypus, Phoca vitulina,* and *Cystophora cristata."*

Snyder, Noel F. R., Helen A. Snyder, Jeffrey L. Lincer, and Richard T. Reynolds. ORGANOCHLORINES, HEAVY METALS, AND THE BIOLOGY OF NORTH AMERICAN ACCIPITERS. *BioScience* 23(5): 300-305, 2 figs. May 1973. *WR 151: 11*
[Box 21, Palmer, Puerto Rico.] *"Accipiter cooperii, A. striatus* and *A. gentilis."*

Stickel, L. F. PESTICIDE RESIDUES IN BIRDS AND MAMMALS. Reprint from *Environmental Pollution by Pesticides* (C. A. Edwards, editor). p. 254-312. 1973. *WR 151: 11*
[Patuxent Wildl. Res. Cent., Laurel, Md.] The occurrence and distribution of organochlorine pesticides in birds and mammals are described, and the research on the effects of these chemicals upon organisms and populations.

Stickel, William H., John A. Galyen, Russell A. Dyrland, and Donald L. Hughes. TOXICITY AND PERSISTENCE OF MIREX IN BIRDS. Reprint from *Pesticides and the Environment* (William B. Deichmann, editor). p. 437-467, 6 figs. 1973. *WR 151: 11*
[Patuxent Wildl. Res. Cent., Laurel, Md.] *"Quiscalus quiscula, Molothrus ater* and *Sturnus vulgaris."*

Vohra, Pran. FLUORIDE TOLERANCE OF JAPANESE QUAIL. *Poultry Sci.* 52(1): 391-393. Jan. 1973. *WR 151: 11*
[Univ. Calif., Davis.] Abstract: A level of 50 p.p.m. fluoride ion in the form of sodium fluoride in the drinking water of Japanese quail had no effect on body weight, mortality, tibia weight per 100 gm. body weight, bone ash, or egg shell thickness as compared to distilled water. Levels of fluoride up to 200 p.p.m. were well-tolerated in drinking water but a level of 500 p.p.m. was lethal.

Vos, J. G. TOXICOLOGY OF PCBs FOR MAMMALS AND FOR BIRDS. *Environ. Health Perspect. Exp. Issue* no. 1. p. 105-117, 7 figs. Apr. 1972. *WR 151: 11*
[State Univ. Utrecht, Utrecht, Netherlands.]

White, Clayton M., William B. Emison, and Francis S. L. Williamson. DDE IN A RESIDENT ALEUTIAN ISLAND PEREGRINE POPULATION. *Condor* 75(3): 306-311. Autumn 1973. *WR 151: 11*
[Brigham Young Univ., Provo, Utah.] Peregrine falcons *(Falco peregrinus)* on the north slope of Alaska were found to carry about four and one-half times more DDE than those from the Aleutian Islands. Reasons for this difference are suggested.--Courtesy/ Paul A. Stewart.

Wobeser, Gary Arthur. AQUATIC MERCURY POLLUTION: STUDIES OF ITS OCCURRENCE AND PATHOLOGIC EFFECTS ON FISH AND MINK. *Ph.D. thesis, Univ. Saskatchewan.* 250 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 11*

Wolfe, James L., and B. R. Norment. ACCUMULATION OF MIREX RESIDUES IN SELECTED ORGANISMS AFTER AN AERIAL TREATMENT, MISSISSIPPI--1971-72. *Pestic. Monit. J.* 7(2): 112-116. Sept. 1973. *WR 151: 11*
[Miss. State Univ., Mississippi State.] Residue levels in mammals were obviously stratified according to food habits. Strict herbivores had the lowest levels, omnivores intermediate levels, and insectivore-carnivores the highest levels. Generally, the residues detected were lower than those previously reported and presumably reflected the lower rate of mirex application (1X rate versus the normal 4X or 2X rate). The fact that the compound was concentrated by certain nontarget organisms even at this low rate of application and stratified by trophic level is worthy of note.--From abstr.

WILDLIFE--POLLUTION--Continued

Zabik, Mary E., and Rachel Schemmel. DIELDRIN STORAGE OF OBESE, NORMAL, AND SEMISTARVED RATS. *Arch. Environ. Health* 27(1): 25-30, 6 figs. July 1973. *WR 151: 12*

[Mich. State Univ., East Lansing.] Abstract: Dieldrin tissue levels in obese and "normal" weight adult male Osborne Mendel rats that had been on weight maintenance or weight reduction diets were compared with levels immediately after dieldrin feeding. Normal weight animals exhibited higher tissue pesticide reductions while very little of the body burden of dieldrin was lost in obese rats. Neither group exhibited any elevation of dieldrin levels in the brain because of tissue mobilization.

WILDLIFE--PARASITES & DISEASES

Selimov, M. A. [SOME CHARACTERISTICS OF CONTEMPORARY EPIZOOTOLOGY AND EPIDEMIOLOGY OF RABIES.] *Zh. Mikrobiol. Epidemiol. Immunobiol.* 49(11): 129-138, illus. 1972. [From Biol. Abstr. 56(8), 1973. In Russian with English summ.] *WR 151: 12*

[Inst. Polio. Viral. Encephalitis, Acad. Med. Sci. USSR, Moscow, USSR.]

Trainer, Daniel O. WILDLIFE AS MONITORS OF DISEASE. *Am. J. Public Health* 63 (3): 201-203, illus. 1973. [From Biol. Abstr. 56(8), 1973.] *WR 151: 12*

[Univ. Wis., Stevens Point.]

WILDLIFE--OTHER MORTALITY FACTORS

Feldmann, Bruce Max, and Tony H. Carding. FREE-ROAMING URBAN PETS. *Health Serv. Rep.* 88(10): 956-962, illus. Dec. 1973. *WR 151: 12*

[Univ. Calif., Berkeley.] "A free-roaming dog or cat is a potential ecological, medical, and social threat in several ways: 1. Harboring diseases transmissible to man. 2. Inflicting bites. 3. Damaging property and wildlife. 4. Causing accidents. 5. Creating nuisances and pollution."

WILDLIFE--POPULATIONS & FLUCTUATIONS

Arnason, A. Neil. THE ESTIMATION OF POPULATION SIZE, MIGRATION RATES AND SURVIVAL IN A STRATIFIED POPULATION. *Res. Popul. Ecol.* 15(1): 1-8. Sept. 1973. In English with Japanese summ. *WR 151: 12*

[Univ. Manitoba, Winnipeg, Canada.] Summary: Estimates of survival, migration rates, and population size are developed for a triple catch marking experiment on n ($n \geq 2$) areas with migration among all areas and death in all areas occurring, but no recruitment (birth). This represents the extension to three sampling times of the method of CHAPMAN and JUNGE (1956) for estimates in a stratified population. The method is further extended to allow for 'losses on capture'.

WILDLIFE--BIOMETRICS

Chatterjee, Samprit. A MATHEMATICAL MODEL FOR PEST CONTROL. *Biometrics* 29 (4): 727-734. Dec. 1973. In English with French summ. *WR 151: 12*

[New York Univ., New York, N.Y.]

WILDLIFE--TECHNIQUES

Dyring, Eric. THE PRINCIPLES OF REMOTE SENSING. *Ambio* 2(3): 57-69, illus. 1973. *WR 151: 12*

Emphasis on the practical application of remote sensing techniques in the early detection of damages to the environment. Includes an introduction to the principles and a summary of the techniques used.

WILDLIFE--TECHNIQUES--Continued

Pennycuick, C. J. THE SHADOWMETER: A SIMPLE DEVICE FOR CONTROLLING AN AIRCRAFT'S HEIGHT ABOVE THE GROUND. *E. Afr. Wildl. J.* 11(1): 109-112, 3 figs. Mar. 1973. *WR 151: 13*
[Univ. Bristol, Bristol, England.]

Rutkowiak, Bohdan. BADANIA RADIOLOICZNE ZWIERZAT W OGRODACH ZOOLOGICZNYCH. [X-RAY EXAMINATIONS OF ANIMALS IN ZOOLOGICAL GARDENS.] *Przegl. Zool.* 16(1): 74-80, illus. 1972. [From Biol. Abstr. 56(6), 1973. In Polish with English summ.] *WR 151: 13*
[Zakl. Hig. Weter., Gdansk-Oliwa, Poland.]

Wilson, John. THE SURVEY ROUTE / OR, EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT COUNTING WILDLIFE. *Ky. Happy Hunting Ground* 29(6): 4-6, illus. Nov. 1973. *WR 151: 13*
Popular account of game surveys in Kentucky.

WILDLIFE--MANAGEMENT & RESEARCH, GENERAL

Heusmann, H. W. HOW TO CREATE WILDLIFE HABITAT FROM HIGHWAY CONSTRUCTION. *Catalyst* 3(4): 17-19, illus. 1973. *WR 151: 13*
[Mass. Div. Fisheries & Game, Boston.]

Marks, Stuart A. PREY SELECTION AND ANNUAL HARVEST OF GAME IN A RURAL ZAMBIAN COMMUNITY. *E. Afr. Wildl. J.* 11(2): 113-128, 2 figs. June 1973. *WR 151: 13*
[St. Andrews Presbyterian Coll., Laurinburg, N.C.] Game abundance, classification of hunters, duration of hunts, effectiveness of individual hunters, frequency of kills and meat supply, and prey selection: species, age and sex are the major topics of discussion.

Schole, Bernhard J. A LITERATURE REVIEW ON CHARACTERISTICS OF HUNTERS. *Colo. Div. Wildl. Spec. Rep.* no. 33. iv + 15 p. Nov. 1973. Price $1.00. *WR 151: 13*
In addition to a selected bibliography there is discussion of the following topics: factors affecting rates of participation in hunting, factors initiating interest in hunting, reasons for hunting, reasons for quitting hunting, comparison of hunter types, and comparison of hunters with other outdoor recreationists.

Toth, Steve. A PROFILE OF THE NEW JERSEY BOW HUNTER. *N.J. Outdoors* 24(4): 16-17. Oct. 1973. *WR 151: 13*

WILDLIFE--INTRODUCTIONS

Eckhardt, Robert C. INTRODUCED PLANTS AND ANIMALS IN THE GALÁPAGOS ISLANDS. *BioScience* 22(10): 585-590, 3 figs. Oct. 1972. *WR 151: 13*
[Cornell Univ., Ithaca, N.Y.]

WILDLIFE--ECONOMIC & OTHER VALUES

Hartman, Fred E. IN PENNSYLVANIA...HUNTING IS BIG BUSINESS. *Pa. Game News* 44(9): 26-31, 42, illus. Sept. 1973. *WR 151: 13*
Pennsylvania hunters spend $223 million per year in pursuit of their sport.

WILDLIFE--FOOD HABITS & TECHNIQUES

Burns, Thomas A., and Charles E. Viers. CALORIC AND MOISTURE CONTENT VALUES OF SELECTED FRUITS AND MAST. *J. Wildl. Manage.* 37(4): 585-587. Oct. 1973. *WR 151: 13*
[Northwestern State Univ., Natchitoches, La.]

WILDLIFE--FOOD HABITS & TECHNIQUES--Continued

Pogge, Franz L. GREENBRIERS GREAT FOR WILDLIFE. *Pa. Game News* 44(7): 29-31, illus. July 1973. *WR 151: 14*
[Forestry Sci. Lab., Morgantown, W. Va.]

WETLANDS & WILDLIFE

Cowardin, Lewis M., and Douglas H. Johnson. A PRELIMINARY CLASSIFICATION OF WETLAND PLANT COMMUNITIES IN NORTH-CENTRAL MINNESOTA. *U.S. Fish Wildl. Serv. Spec. Sci. Rep. Wildl.* no. 168. ii + 33 p. 1973. For sale at 55¢ by Supt. Documents, GPO, Washington, D.C. *WR 151: 14*
Abstract: A classification of wetland plant communities was developed for a study area in north-central Minnesota in order to analyze data on waterfowl use of habitat that were gathered by ratio telemetry. The classification employs features of several earlier classifications in addition to new classes for bogs and lakeshore communities. Brief descriptions are given for each community, and the important plant species are listed. Discriminant function analysis was used for 40 plant species. Seventy-five percent of the stands studied were classified correctly by this technique. Average probabilities of assignment to communities were calculated and helped to identify distinct and poorly defined communities as well as the relationship among communities.

Larson, Joseph S., editor. A GUIDE TO IMPORTANT CHARACTERISTICS AND VALUES OF FRESHWATER WETLANDS IN THE NORTHEAST. *Univ. Mass. Water Resour. Cent. Publ.* no. 31. ii + 35 p. + large folded maps. July 1973. *WR 151: 14*
Major topics of discussion: wetlands and groundwater, visual-cultural values of wetlands, wildlife and wetlands, and economics of preserving inland wetlands for water supply.

FORESTLAND--MANAGEMENT FOR & DAMAGE BY WILDLIFE

Hansbrough, Thomas. A FORESTER LOOKS AT WILDLIFE MANAGEMENT. *J. Forestry* 71 (7): 404, 406. July 1973. *WR 151: 14*
[Univ. Ky., Lexington.]

Hansen, Henry L., Laurits W. Krefting, and Vilis Kurmis. THE FOREST OF ISLE ROYALE IN RELATION TO FIRE HISTORY AND WILDLIFE. *Univ. Wis. Agric. Exp. Stn. Tech. Bull.* 294 *For. Ser.* 13. 43 p., 13 figs. Oct. 1973. *WR 151: 14*
[U.S. Fish & Wildl. Serv., St. Paul, Minn.] Major topics of discussion include: Isle Royale--the study area; investigative procedures; forest types, species, and ecological relationships; forest fire history; the moose herd; other wildlife; and summary of vegetation changes and their implications for wildlife.

Ripley, Thomas H. A WILDLIFER LOOKS AT FOREST RESOURCE MANAGEMENT. *J. Forestry* 71(7): 405-406. July 1973. *WR 151: 14*
[Div. Forestry, Fisheries & Wildl. Development, TVA, Norris, Tenn.]

MAMMALS--GENERAL

Addis, John P., Gary M. Wenberg, and Jack C. Holland. ELECTROPHORESIS OF THE HEMOGLOBIN OF THREE ANIMALS IN THE HIBERNATING AND NON-HIBERNATING STATE. *Comp. Biochem. Physiol. A Comp. Physiol.* 44(4): 1251-1255, illus. 1973. [From Biol. Abstr. 56(6), 1973.] *WR 151: 14*
[Mich. Technol. Univ., Houghton.] *"Marmota monax, Myotis lucifugus,* and *Citellus lateralis."*

Estes, Richard D. THE ROLE OF THE VOMERONASAL ORGAN IN MAMMALIAN REPRODUCTION. *Mammalia* 36(3): 315-341, illus. 1972. [From Biol. Abstr. 56(6), 1973. In English with French summ.] *WR 151: 14*
[Harvard Mus. Comp. Zool., Cambridge, Mass.]

Geist, Valerius. AN ECOLOGICAL AND BEHAVIORAL EXPLANATION OF MAMMALIAN CHARACTERISTICS, AND THEIR IMPLICATION TO THERAPSID EVOLUTION. *Z. Saeugetierkd.* 37(1): 1-15, illus. 1972. [From Biol. Abstr. 56(6), 1973. In English with German summ.] *WR 151: 15*
[Univ. Calgary, Calgary, Alberta, Canada.]

Guthrie, R. D., and Ronald G. Petocz. WEAPON AUTOMIMICRY AMONG MAMMALS. *Am. Nat.* 104(940): 584-588, 2 figs. Nov.-Dec. 1970. *WR 151: 15*
[Univ. Alaska, College.] "From a survey of various mammals we conclude that while it is not necessarily common for animals to have false weapons or mimics of their weaponry to complement the intraspecific threatening value of their real weaponry, the phenomenon has occurred in some lines."

Hopson, James A. ENDOTHERMY, SMALL SIZE, AND THE ORIGIN OF MAMMALIAN REPRODUCTION. *Am. Nat.* 107(955): 446-452. May-June 1973. *WR 151: 15*
[Univ. Chicago, Chicago, Ill.]

Johnson, Roger P. SCENT MARKING IN MAMMALS. *Anim. Behav.* 21(3): 521-535. Aug. 1973. *WR 151: 15*
[Edinburgh Univ., Edinburgh, Scotland.] Abstract: This paper reviews experimental and field studies on scent marking behaviour. The occurrence and effects of scent marking are considered in particular, and a number of areas for further research are made apparent. Marking behaviour in mammals is often stated to be 'territorial' or, more specifically, to play a role in territorial defence. In fact there is a shortage of evidence to support this view; many of the relevant observations are anecdotal or interpreted with preconceived notions of function in mind. While marking is clearly associated with aggressive behaviour in many species and may therefore be related in some way to territorial behaviour, its role in aggression is not understood. Moreover, there is evidence to support a number of other theories of function some of which are unrelated to territory. It seems that, as with any other mode of communication, scent marking has become adapted for use in a variety of contests. It probably has more than one function in any one species and different functions in different species.

Kanagawa, H., and E. S. E. Hafez. MORPHOLOGY OF CERVUS UTERI OF RODENTIA, CARNIVORA AND ARTIODACTYLA. *Acta Anat.* 84(1): 118-128, illus. 1973. [From Biol. Abstr. 56(6), 1973.] *WR 151: 15*
[Wayne State Univ., Detroit, Mich.]

Kleiman, D. G., and J. F. Eisenberg. COMPARISONS OF CANID AND FELID SOCIAL SYSTEMS FROM AN EVOLUTIONARY PERSPECTIVE. *Anim. Behav.* 21(4): 637-659, 1 fig. Nov. 1973. *WR 151: 15*
[Natl. Zool. Park, Washington, D.C.] Canids and felids are compared regarding evolutionary history, distribution, habitat preferences, morphology and behavior. --From abstr.

Ortwein, L. DIE VERBISSSCHUTZPROBLEME IN POLEN UND DIE AUSSICHTEN DES CHEMISCHEN VERBISSSCHUTZES. [WILD ANIMAL DAMAGE IN POLAND AND POSSIBILITIES OF LIMITING IT BY CHEMICALS.] *Ans. Schaedlingskd. Pflanzenschutz* 45(6): 86-89. 1972. [From Biol. Abstr. 56(7), 1973. In German with English summ.] *WR 151: 15*
[Inst. Plant Protection, Poznan, Poland.]

Tayler, C. K., and G. S. Saayman. THE SOCIAL ORGANISATION AND BEHAVIOR OF DOLPHINS *(TURSIOPS ADUNCUS)* AND BABOONS *(PAPIO URSINUS)*: SOME COMPARISONS AND ASSESSMENTS. *Ann. Cape Prov. Mus. Nat. Hist.* 9(2): 11-49, illus. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 15*
[Port Elizabeth Mus. Snake Park & Oceanarium, Port Elizabeth, South Africa.]

MAMMALS--TECHNIQUES

Denny, M. J. S., and T. J. Dawson. A FIELD TECHNIQUE FOR STUDYING WATER METABOLISM OF LARGE MARSUPIALS. *J. Wildl. Manage.* 37(4): 574-578. Oct. 1973. *WR 151: 16*
[Univ. New South Wales, Kensington, Australia.] *"Macropus robustus."*

Pelikan, Jaroslav, Jan Zejda, and Vera Holisova. INFLUENCE OF PREBAITING ON THE CATCH OF SMALL MAMMALS. *Zool. Listy* 21(3): 209-225, illus. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 16*
[Czech. Acad. Sci., Kvetna 8, Brno, Czechoslovakia.]

Spinage, C. A. A REVIEW OF THE AGE DETERMINATION OF MAMMALS BY MEANS OF TEETH, WITH ESPECIAL REFERENCE TO AFRICA. *E. Afr. Wildl. J.* 11(2): 165-187, 9 figs. June 1973. *WR 151: 16*
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MAMMALS--POPULATIONS, HOME RANGES, COMMUNITIES

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[Va. Polytech. Inst., Blacksburg.] "In Virginia, foxes (red and gray) are the principal wild animals involved in rabies outbreak."

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[Carleton Univ., Ottawa, Ontario, Canada.]

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[Univ. Nairobi, Nairobi, Kenya.]

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[Environmental Sciences Div., Oak Ridge Natl. Lab., Oak Ridge, Tenn.] *"Blarina brevicauda."*--Courtesy/ Paul A. Stewart.

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[Natl. Animal Disease Lab., Ames, Iowa.] In *Suncus murinus*.

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[Ain Shams Univ., Cairo, Egypt.]

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[Biol. Inst., Acad. Sci. USSR, Novosibirsk, USSR.]

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[Biol. Inst., Acad. Sci. USSR, Novosibirsk, USSR.]

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[Dep. Parasitol., Polish Acad. Sci., Warsaw, Poland.] See *WR 141: 23, WR 143: 22* and *WR 145: 23* for other papers of this series.

RABBITS & PIKAS

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[Min. Agric. Fisheries & Food, Pest Infestation Control Lab., Tangley Place, Worplesdon, Guildford, Surrey, England.]

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RODENTS--MISCELLANEOUS

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Best, Troy L. ECOLOGICAL SEPARATION OF THREE GENERA OF POCKET GOPHERS (GEOMYIDAE). *Ecology* 54(6): 1311-1319, 1 fig. Autumn 1973. *WR 151: 20*
[Univ. Okla., Norman.] Soil type appears to be the primary factor influencing the geographical separation of the three gophers: *Geomys bursarius jugossicularis, Thomomys bottae cultellus,* and *Pappogeomys castanops.*--Courtesy/ Paul A. Stewart.

Brown, Ernest B. III. CHANGES IN PATTERNS OF SEASONAL GROWTH OF *MICROTUS PENNSYLVANICUS. Ecology* 54(5): 1103-1110, 8 figs. Late Summer 1973. *WR 151: 20*
[Univ. Minn., Minneapolis.] *Microtus pennsylvanicus* born in the spring and early summer attained adult size in 12 weeks or less. Animals born in middle or late summer, stopped growing in the fall and resumed growth in the spring.--From abstr. Courtesy/ Paul A. Stewart.

Chaturvedi, G. C., and C. R. Madsen. OBSERVATION ON THE INTENSITY OF RODENT BURROWS IN SELECTED FIELD AREAS. *Bull. Grain Technol.* 9(4): 293-296. 1971. [From Biol. Abstr. 56(8), 1973.] *WR 151: 20*
[Rodent Control Proj., Sidhpur, Gujavat, India.] *"Tatera* sp. and *Meriones* sp."

Choate, Thomas S. BEHAVIOURAL STUDIES ON SOME RHODESIAN RODENTS. *Zool. Afr.* 7(1): 103-118, illus. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 20*
[Univ. Rhodesia, Salisbury, Rhodesia.] Field studies (Lake Kariba shoreline and Salisbury) and experiments with a captive colony of 12 spp. of Rhodesian rodents were undertaken for a period of three years.

Colvin, Dallas V. AGONISTIC BEHAVIOUR IN MALES OF FIVE SPECIES OF VOLES *MICROTUS. Anim. Behav.* 21(3): 471-480. Aug. 1973. *WR 151: 20*
[Calif. State Coll., Dominguez Hills.] Abstract: Agonistic behaviour of *Microtus pennsylvanicus, M. montanus, M. californicus, M. longicaudus,* and *M. ochrogaster* was observed in 160 staged encounters; a natural observation of sympatric species is included. No difference in the character and movements of agonistic behaviour was apparent when arena size was reduced; only a difference in the frequency of postures and movements was observed. In the smaller arena, *M. montanus* and *M. ochrogaster* exhibited a significant increase in frequency of agonistic components. The other three species did not show a significant increase. In interspecific pairings, *M. montanus* won over *M. pennsylvanicus, M. californicus* and *M. longicaudus; M. ochrogaster* won over *M. montanus* and *M. pennsylvanicus.* Three species used mutual avoidance in maintaining individual distance.

Cooper, James J., and Ralph L. Levine. EFFECTS OF SOCIAL INTERACTION ON EATING AND DRINKING IN TWO SUBSPECIES OF DEERMICE, *PEROMYSCUS MANICULATUS BAIRDII* AND *PEROMYSCUS MANICULATUS GRACILIS. Anim. Behav.* 21(3): 421-428. Aug. 1973. *WR 151: 20*
[Mich. State Univ., East Lansing.]

Crowell, Kenneth L. EXPERIMENTAL ZOOGEOGRAPHY: INTRODUCTIONS OF MICE TO SMALL ISLANDS. *Am. Nat.* 107(956): 535-558, 3 figs. July-Aug. 1973. *WR 151: 21*
[Saint Lawrence Univ., Canton, N.Y.] *Microtus pennsylvanicus* is the only rodent native to small islands in the Gulf of Maine. *Peromyscus maniculatus* is found on larger islands, even when rather remote, while *Clethrionomys gapperi* occurs only on the largest islands within 1 mile of the mainland. Population dynamics and rates of extinction and recolonization of resident *Microtus* populations were studied from 1962 to 1972. During this period, the ability of *Peromyscus* and *Clethrionomys* to establish and maintain insular populations was tested through experimental introductions of from one to eight pairs.--From summ.

Davis, R. M. BEHAVIOUR OF THE VLEI RAT, *OTOMYS IRRORATUS* (BRANTS, 1827). *Zool. Afr.* 7(1): 119-140, illus. 1972. [From Biol. Abstr. 56(5), 1973.] *WR 151: 21*
[Dep. Health, Private Bag 88, Pretoria, South Africa.]

Douglass, Richard Jones. SPATIAL INTERACTIONS AND MICRO-HABITAT SELECTIONS OF TWO LOCALLY SYMPATRIC VOLES, *MICROTUS MONTANUS* AND *MICROTUS PENNSYLVANICUS*. *Ph.D. thesis, Mont. State Univ.* 55 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 21*

Gaertner, Ronald A., J. Sanford Hart, and Orest Z. Roy. SEASONAL SPONTANEOUS TORPOR IN THE WHITE-FOOTED MOUSE, *PEROMYSCUS LEUCOPUS*. *Comp. Biochem. Physiol. A Comp. Physiol.* 45(1): 169-181, illus. 1973. [From Biol. Abstr. 56(7), 1973.] *WR 151: 21*
[W. Va. Inst. Technol., Montgomery.]

Genoways, Hugh H. SYSTEMATICS AND EVOLUTIONARY RELATIONSHIPS OF SPINY POCKET MICE, GENUS *LIOMYS*. *Spec. Publ. Mus. Tex. Tech Univ.* no. 5. 368 p., 66 figs. 7 Dec. 1973. Price $7.00. *WR 151: 21*

Goertz, John W., and Roland C. Long. HABITATS OF FIVE SPECIES OF RAT IN LOUISIANA. *Am. Midl. Nat.* 90(2): 460-465. Oct. 1973. *WR 151: 21*
[La. Tech. Univ., Reston.] *"Sigmodon hispidus, Neotoma floridana, Oryzomys palustris, Rattus rattus* and *R. norvegicus."*

Hastings, William S., Jr., and Gerald C. Llewellyn. THE EFFECT OF AFLATOXIN B ON GROWTH RATE AND IRON METABOLISM IN JUVENILE MONGOLIAN GERBILS *(MERIONES UNGUICULATUS)*. *Environ. Physiol. Biochem.* 3(5): 214-220, 2 figs. 1973. *WR 151: 21*
[Va. Commonwealth Univ., Richmond.]

Hrabe, Vit. CONTRIBUTION TO THE ANALYSIS OF THE SEXUAL CYCLE OF MALE *CLETHRIONOMYS GLAREOLUS* SCHR. (RODENTIA). *Zool. Listy* 21(4): 309-318, illus. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 21*
[Inst. Vertebr. Zool., Czech. Acad. Sci., Kvetna 8, Brno, Czechoslovakia.]

Imaizumi, Yoshinori. [LAND MAMMALS OF THE HIDAKA MOUNTAINS, HOKKAIDO, JAPAN, WITH SPECIAL REFERENCE TO THE ORIGIN OF AN ENDEMIC SPECIES OF THE GENUS *CLETHRIONOMYS*.] *Mem. Natl. Sci. Mus.* (Tokyo) 5. p. 131-149, illus. 1972. [From Biol. Abstr. 56(7), 1973. In Japanese with English summ.] *WR 151: 21*
[Natl. Sci. Mus., Tokyo, Japan.]

Kaikusalo, Asko. POPULATION TURNOVER AND WINTERING OF THE BANK VOLE, *CLETHRIONOMYS GLAREOLUS* (SCHREB.), IN SOUTHERN AND CENTRAL FINLAND. *Ann. Zool. Fenn.* 9 (4): 219-224, illus. 1972. [From Biol. Abstr. 56(5), 1973.] *WR 151: 21*
[Kilpisjarvi Biol. Stn., Helsinki, Finland.]

Kenagy, G. J. DAILY AND SEASONAL PATTERNS OF ACTIVITY AND ENERGETICS IN A HETEROMYID RODENT COMMUNITY. *Ecology* 54(6): 1201-1219, 9 figs. Autumn 1973. *WR 151: 21*
[Univ. Calif., Los Angeles.] Behavioral and physiological aspects of the ecology of the chisel-toothed kangaroo rat *(Dipodomys microps)*, Merriam's

kangaroo rat *(D. merriami)*, and the little pocket mouse *(Perognathus longimembris)* in relation to the acquisition and expenditure of energy are discussed. --Courtesy/ Paul A. Stewart.

Kirkland, Gordon L., Jr. OBSERVATIONS ON THE DEGREE OF OSSIFICATION IN NEONATAL *NAPAEOZAPUS INSIGNIS* (PREBLE). *Am. Midl. Nat.* 90(2): 465-467, 1 fig. Oct. 1973. *WR 151: 22*
[Shippensburg State Coll., Shippensburg, Pa.]

Kisielewska, Krystyna, Krystyna Fraczak, Iwona Krasowska, and Zofia Zubczewska. STRUCTURE OF THE INTESTINAL HELMINTHOCOENOSIS IN THE POPULATION OF *MICROTUS ARVALIS* PALLAS, 1778, AND THE MECHANISMS OF ITS VARIABILITY. *Acta Parasitol. Pol.* 21(1-10): 71-83, illus. 1973. [From Biol. Abstr. 56(8), 1973. In English with Polish summ.] *WR 151: 22*
[Pol. Akad. Nauk, Warsaw, Poland.]

Le Louarn, H., and A. Schmitt. RELATIONS OBSERVEES ENTRE LA PRODUCTION DE FAINES ET LA DYNAMIQUE DE POPULATION DU MULOT, *APODEMUS SYLVATICUS* L. EN FORET DE FONTAINEBLEAU (1). [INTERRELATIONS BETWEEN BEECHNUT PRODUCTION AND POPULATION DYNAMICS OF FIELDMOUSE, *APODEMUS SYLVATICUS* IN THE FOREST OF FONTAINEBLEAU.] *Ann. Sci. For.* 30(2): 205-214, illus. 1972. [From Biol. Abstr. 56(9), 1973. In French with German and English summ.] *WR 151: 22*
[Inst. Natl. Rech. Agron., Jouy-en-Josas, France.]

Lidicker, William Z., Jr. REGULATION OF NUMBERS IN AN ISLAND POPULATION OF THE CALIFORNIA VOLE, A PROBLEM IN COMMUNITY DYNAMICS. *Ecol. Monogr.* 43(3): 271-302, 15 figs. Summer 1973. *WR 151: 22*
[Univ. Calif., Berkeley.] The following are discussed: making density estimates, major features of density changes, movement, wounds, reproduction, age structure of population, recruitment, sex ratios, body weight, ectoparasites, and molt.--Courtesy/ Paul A. Stewart.

Malan, A., H. Arens, and A. Waechter. PULMONARY RESPIRATION AND ACID-BASE STATE IN HIBERNATING MARMOTS AND HAMSTERS. *Resp. Physiol.* 17(1): 45-61, illus. 1973. [From Biol. Abstr. 56(6), 1973.] *WR 151: 22*
[Lab. Physiol. Resp. CNRS, 23 rue Beguerel, Strasbourg, France.] *"Marmota marmota* and *Cricetus cricetus."*

Martin, Robert L. PARASITES AND DISEASES OF THE ROCK VOLE. *Univ. Conn. Occas. Pap. Biol. Sci. Ser.* 2(8): 107-113. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 22*
[Univ. Maine, Farmington.] *"Microtus chrotorrhinus."*

Maxwell, Marvin H. RODENT ECOLOGY AND PRONGHORN ENERGY RELATIONS IN THE GREAT DIVIDE BASIN OF WYOMING. *Ph.D. thesis, Univ. Wyo.* 226 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 22*
Data are presented on rodent populations, capture, reproduction, range of activity, diversity, habitat affinities, food habits, assimilation efficiencies, and rodent and pronghorn energy relations as well as energy equivalents of vegetation. Rodent diversity was correlated with vegetation cover and community maturity.

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[P.O. Box 49, Chilanga, Lusaka, Zambia.] Summary: Age criteria for the African buffalo are described. These are based on the tooth eruption sequence and on wear of the first molar. Assignment of absolute ages to the tooth eruption and wear classes has been made by reference to known-age animals and to numbers of cementum lines in tooth sections. For ageing animals to the nearest year, the normal degree of accuracy of the methods is assumed to be about ± 1/2 year (1-5 years of age); about ± 1 year (5-15 years of age); and about ± 2 years (15-20 years of age). A field method of age determination is presented based on horn characteristics and relative body size.

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[Univ. Alaska, Fairbanks.] Abstract: Fifty-three caribou *(Rangifer tarandus)* were electrocuted by lightning in the Alaska Range in early June 1972. A giant Lichtenberg pattern, found engraved onto the Arctic tundra terrain at the kill site, is described. It is estimated that an event of this type would be expected to occur in Alaska at a frequency of once every several decades.

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[Dep. Zool., South Parks Rd., Oxford, England.] *"Syncerus caffer* and *Connochaetes taurinus albojubatus."*

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[Univ. Wis., Stevens Point.] Abstract: Fourteen woodland caribou *(Rangifer tarandus terraenovae)* were released into a game reserve occupied by white-tailed deer *(Odocoileus virginianus)* with a high prevalence of the meningeal worm *(Parelapostrongylus tenuis).* Within 6 months all of the caribou had succumbed to this parasite. The clinical, pathological, and epizootiological findings associated with this die-off are described.

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[Tex. A&M Univ., College Station.] *"Gazella granti, G. thomsoni, Adenota kob* and *Connochaetes taurinus."*

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DEER (Odocoileus)

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[Okla. State Univ., Stillwater.]

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[Smith Coll., Northampton, Mass.]

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[Southern Forest Exp. Stn., Nacogdoches, Tex.] Abstract: Practical management guidelines permit the forest landowner to improve white-tailed deer habitat in loblolly-shortleaf pine timber stands while maintaining or improving timber production. Deer food, and thus deer herds, can be increased by widely spacing and frequently thinning trees, retaining hardwoods along drainageways, prescribed burning, regulating the size, shape, and distribution of cutting units, establishing and maintaining forest openings, and favoring desirable food plants.

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[Blacksburg, Va.] Includes photos of the annual development of antlers.

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[Univ. Guelph, Guelph, Ontario, Canada.]

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[Univ. Saskatchewan, Saskatoon, Saskatchewan, Canada.]

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[Va. Polytech. Inst., Blacksburg.] Abstract: Measurements of heart girth and hog-dressed weight were made on a sample of 528 white-tailed deer *(Odocoileus virginianus)* harvested in Virginia during the 1971 hunting season. Two linear regression equations (one for fawns and one for adult deer) were derived and used to develop the dimensions of a tape for estimating body weights.

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[Mich. Dep. Nat. Resour., Shingleton.] *"Odocoileus virginianus."*

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[Dominion Mus., Wellington, New Zealand.]

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[Univ. Fla., Gainesville.]

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Gaskin, D. E., and M. W. Cawthorn. SPERM WHALES *(PHYSETER CATODON* L.*)* IN THE COOK STRAIT REGION OF NEW ZEALAND: SOME DATA ON AGE, GROWTH AND MORTALITY. *Norw. J. Zool.* 21(1): 45-50, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 36*
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[Univ. Fla., Gainesville.]

Herman, Louis M., and William R. Arbeit. STIMULUS CONTROL AND AUDITORY DISCRIMINATION LEARNING SETS IN THE BOTTLENOSE DOLPHIN. *J. Exp. Anal. Behav.* 19 (3): 379-394, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 36*
[Univ. Hawaii, Honolulu.]

Mawdesley-Thomas, Lionel E. A BIBLIOGRAPHY OF SOME DISEASES OF MARINE MAMMALS. *Vet. Bull.* 43(12): 657-664. Dec. 1973. *WR 151: 36*
Bibliography of 212 items.

Mercer, M. C. OBSERVATIONS ON DISTRIBUTION AND INTRASPECIFIC VARIATION IN PIGMENTATION PATTERNS OF ODONTOCETE CETACEA IN THE WESTERN NORTH ATLANTIC. *J. Fish. Res. Board Can.* 30(8): 1111-1130 + 7 figs. on 4 pls. Aug. 1973. In English with French summ. *WR 151: 36*
[Fisheries Res. Board Canada, Biol. Stn., St. John's, Newfoundland, Canada.]
Abstract: This paper comprises sight records for nine species and morphometrics, color descriptions, and miscellaneous notes on the food and parasites of seven species of small odontocetes observed from West Greenland to Florida 1967-72. Of interest are the first western Atlantic extralimital record of *Monodon monoceros*, first Newfoundland records of *Stenella coeruleoalba*, and extralimital records of *Delphinapterus leucas* from Newfoundland. Intraspecific variability is described in the pigmentation patterns of *Phocoena phocoena*.

Pepper, R. L., and F. A. Beach III. PRELIMINARY INVESTIGATION OF TACTILE REINFORCEMENT IN THE DOLPHIN. *Cetology* 7. p. 1-8, illus. 1972. [From Biol. Abstr. 56(5), 1973.] *WR 151: 36*
[Naval Undersea Res. & Development Cent., P.O. Box 997, Kailua, Hawaii.]
"Tursiops truncatus."

MAMMALS--MARINE--Continued

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[Marine Lab., Aberdeen, Scotland.] *"Halichoerus grypus* and *Phoca vitulina."*

Ray, G. Carleton. UNDERWATER OBSERVATION INCREASES UNDERSTANDING OF MARINE MAMMALS. *Mar. Technol. Soc. J.* 7(1): 16-20, illus. 1973. [From Biol. Abstr. 56(7), 1973.] *WR 151: 37*
[Johns Hopkins Univ., Baltimore, Md.] *"Leptonychotes weddelli, Phoca (Pusa) hispida,* and *Odobenus rosmarus."*

Sergeant, D. E. FEEDING, GROWTH AND PRODUCTIVITY OF NORTHWEST ATLANTIC HARP SEALS *(PAGOPHILUS GROENLANDICUS). J. Fish. Res. Board Can.* 30(1): 17-29, illus. 1973. [From Biol. Abstr. 56(5), 1973. In English with French summ.] *WR 151: 37*
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Sergeant, D. E. TRANSATLANTIC MIGRATION OF A HARP SEAL, *PAGOPHILUS GROENLANDICUS. J. Fish. Res. Board Can.* 30(1): 124-125, illus. 1973. [From Biol. Abstr. 56(5), 1973. In English with French summ.] *WR 151: 37*
[Arctic Biol. Stn., Ste. Anne de Bellevue, Quebec, Canada.]

Sergeant, D. E. BIOLOGY OF WHITE WHALES *(DELPHINAPTERUS LEUCAS)* IN WESTERN HUDSON BAY. *J. Fish. Res. Board Can.* 30(8): 1065-1090, 16 figs. Aug. 1973. In English with French summ. *WR 151: 37*
[Arctic Biol. Stn., Ste. Anne de Bellevue, Quebec, Canada.]

Smith, Thomas G., Brian Beck, and Gary A. Sleno. CAPTURE, HANDLING, AND BRANDING OF RINGED SEALS. *J. Wildl. Manage.* 37(4): 579-583, 1 fig. Oct. 1973. *WR 151: 37*
[Arctic Biol. Stn., Ste. Anne de Bellevue, Quebec, Canada.]

Tallon, Jim. ELEPHANT SEAL / RETURN FROM OBLIVION. *Natl. Parks Conserv. Mag.* 47(3): 14-16, illus. Mar. 1973. *WR 151: 37*
One of a series on endangered species.

Terhune, J. M. SOME HOODED SEAL *(CYSTOPHORA CRISTATA)* SOUNDS IN MARCH. *Can. J. Zool.* 51(3): 319-321, illus. 1973. [From Biol. Abstr. 56(7), 1973. In English with French summ.] *WR 151: 37*
[Aarhus Univ., Aarhus, Denmark.]

OTHER MAMMALS

Cone, Donna M. CIRCADIAN LOCOMOTOR ACTIVITY IN THE VIRGINIA OPOSSUM. *Bull. Psychonomic Soc.* 1(1A): 13-14, illus. 1973. [From Biol. Abstr. 56(7), 1973.] *WR 151: 37*
[Lynchburg Coll., Lynchburg, Va.]

Dunnet, G. M., A. E. Harvie, and T. J. Smit. ESTIMATING THE PROPORTIONS OF VARIOUS LEAVES IN THE DIET OF THE OPOSSUM, *TRICHOSURUS VULPECULA* KERR, BY FAECAL ANALYSIS. *J. Appl. Ecol.* 10(3): 737-745. Dec. 1973. *WR 151: 37*
[Univ. Aberdeen, Newburgh, Aberdeenshire, Scotland.]

Feldman, Donald B., and James L. Self. ESTABLISHMENT OF A HELMINTH-FREE OPOSSUM COLONY. *Lab. Anim. Sci.* 23(6): 854-857, 1 fig. Dec. 1973. *WR 151: 37*
[Natl. Inst. Health, PO Box 12233, Research Triangle Park, N.C.]

Fowler, Charles W., and Tim Smith. CHARACTERIZING STABLE POPULATIONS: AN APPLICATION TO THE AFRICAN ELEPHANT POPULATION. *J. Wildl. Manage.* 37(4): 513-523, 11 figs. Oct. 1973. *WR 151: 37*
[Univ. Wash., Seattle.]

OTHER MAMMALS--Continued

Grant, T. R. DOMINANCE AND ASSOCIATION AMONG MEMBERS OF A CAPTIVE AND A FREE-RANGING GROUP OF GREY KANGAROOS *(MACROPUS GIGANTEUS)*. *Anim. Behav.* 21(3): 449-456. Aug. 1973. *WR 151: 38*
[Univ. New South Wales, Kensington, Australia.] Abstract: Dominance relationships and the degree of association between members of groups of eastern grey kangaroos *(Macropus giganteus)* were investigated by observing a small group in captivity and a larger free-ranging group. Only decisive aggressive interactions were used as a criterion of dominance, and the number of times individuals occurred together were used as a measure of association. A dominance hierarchy in which the male assumed the highest rank was found in the captive group, while in the wild hierarchies were found separately among both males and females in the group. A low level of positive association existed between members of both the groups studied and the data indicated that in general the free ranging animals tended to move about at random with respect to each other. In the captive group dispersion about the enclosure was regular but became more random during the day in winter and spring.

Hladik, C. M. ALIMENTATION ET ACTIVITE D'UNE GROUPE DE CHIMPANZES REINTRODUITS EN FORET GABONAISE. [FEEDING BEHAVIOR OF A GROUP OF CHIMPANZEES REINTRODUCED INTO A FOREST IN GABON.] *Terre Vie* 1973(3): 343-413, 24 figs. July-Sept. 1973. In French with English summ. *WR 151: 38*
[Mus. Natl. Hist. Nat., Brunoy, France.] *"Pan troglodytes."*

Horwich, Robert H. HOME RANGE AND FOOD HABITS OF THE NILGIRI LANGUR, *PRESBYTIS JOHNII*. *J. Bombay Nat. Hist. Soc.* 69(2): 255-267, illus. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 38*
[Chicago Zool. Soc., Brookfield, Ill.]

Smith, Norman S., and Irven O. Buss. REPRODUCTIVE ECOLOGY OF THE FEMALE AFRICAN ELEPHANT. *J. Wildl. Manage.* 37(4): 524-534, 4 figs. Oct. 1973. *WR 151: 38*
[Univ. Ariz., Tucson.] *"Loxodonta africana."*

Storrs, Eleanor E., and W. E. Greer. MAINTENANCE AND HUSBANDRY OF ARMADILLO COLONIES. *Lab. Anim. Sci.* 23(6): 823-829, 4 figs. Dec. 1973. *WR 151: 38*
[Gulf South Res. Inst., P.O. Box 1177, New Iberia, La.] Housing, diets, and medical care suitable for 3 spp. of armadillos *(Dasypus novemcinctus, D. hybridus,* and *Chaetophractus villosus)* were examined.--From summ.

BIRDS--GENERAL

Beklova, Miroslava. AGE STRUCTURE AND MORTALITY OF THE CZECHOSLOVAKIAN POPULATION OF *TURDUS MERULA* L. 1758, *STURNUS VULGARIS* L. 1758 AND *PARUS MAJOR* L. 1758. *Zool. Listy* 21(4): 337-346, illus. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 38*
[Inst. Vertebr. Zool., Czech. Acad. Sci., Kvetna 8, Brno, Czechoslovakia.]

Bull, John. EXOTIC BIRDS IN THE NEW YORK CITY AREA. *Wilson Bull.* 85(4): 501-505. Dec. 1973. *WR 151: 38*
[Am. Mus. Nat. Hist., New York, N.Y.] Reports on 11 spp. of parrots that are popular as caged birds and have escaped or been released from time to time. Of these 11 spp., two have been found free in large numbers.--Courtesy/ Paul A. Stewart.

Cracraft, Joel. CONTINENTAL DRIFT, PALEOCLIMATOLOGY, AND THE EVOLUTION AND BIOGEOGRAPHY OF BIRDS. *J. Zool. Proc. Zool. Soc. Lond.* 169(4): 455-545, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 38*
[Univ. Ill. Med. Cent., Chicago.]

Hardy, John William. FERAL EXOTIC BIRDS IN SOUTHERN CALIFORNIA. *Wilson Bull.* 85(4): 506-512. Dec. 1973. *WR 151: 39*
[Fla. State Mus., Univ. Fla., Gainesville.] The present status of 14 spp. is discussed.--Courtesy/ Paul A. Stewart.

Holyoak, David T. ENDANGERED LAND-BIRDS IN FRENCH POLYNESIA. *Biol. Conserv.* 5(3): 231-232, 3 figs. July 1973. *WR 151: 39*
[Univ. Sussex, Brighton, Sussex, England.]

Morton, Eugene S. ON THE EVOLUTIONARY ADVANTAGES AND DISADVANTAGES OF FRUIT EATING IN TROPICAL BIRDS. *Am. Nat.* 107(953): 8-22, 1 fig. Jan.-Feb. 1973. *WR 151: 39*
[Univ. Md., College Park.]

Owre, Oscar T. A CONSIDERATION OF THE EXOTIC AVIFAUNA OF SOUTHEASTERN FLORIDA. *Wilson Bull.* 85(4): 491-500. Dec. 1973. *WR 151: 39*
[Univ. Miami, Coral Gables, Fla.] Reports on many species of exotic birds escaped or released from captivity and now breeding naturally in Florida.--Courtesy/ Paul A. Stewart.

Rucner, Renata, editor. LARUS / XXIII / 1969. *Translated and published for the Smithsonian Institution and the National Science Foundation, Washington, D.C., by the Nolit Publishing House, Belgrade, Yugoslavia.* TT 69-51017. 198 p., illus. + 6 folded charts. 1973. Serbo-Croatian original published by Institute of Ornithology in 1971. [Translation available from U.S. Dep. Commerce, National Technical Information Service, Springfield, Va.] *WR 151: 39*
The following papers are included in this issue: *Bird banding in 1967 and 1968. 1. Results of bird banding carried out by the Ornithology Department of the Biology Institute, Zagreb University, 19th Report, 2. Foreign recoveries in Yugoslavia, 15th Report*, Ljubica Štromar; *Ornithogenic biocenoses in the Kvarner*, Andrija Ž. Lovrić; *Register of birds of the autonomous province of Vojvodina*, László Antal, János Fernbach, József Mikuska, István Pelle, and László Szlivka; and *Contribution to the study of the fauna of certain forest communities in Croatia*, Dragutin and Renata Rucner.

Schweitzer, Douglas H., David A. Scott, Arthur W. Blue, and Jonathan P. Secter. RECREATIONAL PREFERENCES FOR BIRDS IN SASKATCHEWAN. *Trans. N. Am. Wildl. Nat. Resour. Conf.* 38: 205-212. 1973. *WR 151: 39*
[Univ. Saskatchewan, Saskatoon, Saskatchewan, Canada.] Analysis of the three preferences (studying, observing, and hunting of birds) revealed that they are independent of one another.

Walley, W. J. A STUDY OF SEVEN WARBLERS IN RIDING MOUNTAIN NATIONAL PARK, MANITOBA. *Blue Jay* 31(3): 158-166, [1 fig.]. Sept. 1973. *WR 151: 39*
[Dauphin Regional Comprehensive Secondary School, Dauphin, Manitoba, Canada.]

BIRDS--TECHNIQUES

Blondel, Jacques, Camille Ferry, and Bernard Frochot. AVIFAUNE ET VEGETATION ESSAI D'ANALYSE DE LA DIVERSITE. [A SAMPLE OF THE ANALYSIS OF THE DIVERSITY OF BIRD FAUNA AND VEGETATION.] *Alauda* 41(1/2): 63-84, illus. 1973. [From Biol. Abstr. 56(9), 1973. In French with English summ.] *WR 151: 39*
[Cent. Ecol. Camargue, Le Sambuc, France.]

Hagen, A., E. Ostbye, and H.-J. Skar. A METHOD FOR CALCULATING THE SIZE OF THE TRAPPING-AREA IN CATCH-MARK-RELEASE CENSUSING OF SMALL RODENTS. *Norw. J. Zool.* 21(1): 59-61. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 39*
[Univ. Oslo, Oslo, Norway.]

BIRDS--TECHNIQUES--Continued

Johnson, Ellis. A DEVICE TO HOLD BIRDS FOR PHOTOGRAPHIC PURPOSES. *Inland Bird Banding News* 45(4): 128-131, 2 figs. July-Aug. 1973. *WR 151: 40*
[10893 Ursula Dr., Willow Springs, Ill.] Courtesy/ Paul A. Stewart.

Slagsvold, T. CRITICAL REMARKS ON BIRD CENSUS WORK PERFORMED BY MEANS OF THE MAPPING METHOD. *Norw. J. Zool.* 21(1): 29-31. 1973. [From Biol. Abstr. 56 (9), 1973.] *WR 151: 40*
[Univ. Oslo, Oslo, Norway.]

Southwick, Edward Earle. REMOTE SENSING OF BODY TEMPERATURE IN A CAPTIVE 25-G BIRD. *Condor* 75(4): 464-466, 2 figs. Winter 1973. *WR 151: 40*
[600 New Hampshire Ave. N.W., Washington, D.C.] A temperature transmitter was developed for surgical implantation in the intraperitoneal cavity of sparrow-sized birds. Because the range of the transmitter was about 1 m, it was useful only on confined birds.--Courtesy/ Paul A. Stewart.

BIRDS--MORPHOLOGY & PHYSIOLOGY

Anderson, Stanley H., and Robert I. Van Hook, Jr. UPTAKE AND BIOLOGICAL TURNOVER OF Cd IN CHIPPING SPARROWS, *SPIZELLA PASSERINA*. *Environ. Physiol. Biochem.* 3(5): 243-247, 3 figs. 1973. *WR 151: 40*
[Oak Ridge Natl. Lab., Oak Ridge, Tenn.]

Blem, Charles R. LABORATORY MEASUREMENTS OF METABOLIZED ENERGY IN SOME PASSERINE NESTLINGS. *Auk* 90(4): 895-897. Oct. 1973. *WR 151: 40*
[Va. Commonwealth Univ., Richmond.] With information on 6 spp.--Courtesy/ Paul A. Stewart.

Budd, Susan M. THERMOREGULATION, BIOENERGETICS, AND ENDOCRINOLOGY OF COLD ACCLIMATIZATION OF BLACK-CAPPED CHICKADEES, *PARUS ATRICAPILLUS*. *Ph.D. thesis, Cornell Univ.* 123 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 40*

Cruz, Alexander. FOOD AND FORAGING ECOLOGY OF THE CHESTNUT-BELLIED CUCKOO. *Wilson Bull.* 85(3): 336-337. Sept. 1973. *WR 151: 40*
[Univ. Colo., Boulder.] *"Hyetornis pluvialis."*--Courtesy/ Paul A. Stewart.

Dolnik, T. [DAILY AND SEASONAL CYCLES OF BLOOD SUGAR IN SEDENTARY AND MIGRATORY BIRDS.] *Zool. Zh.* 52(1): 94-103. 1973. [From Bird-Banding 44(3), 1973. In Russian with English summ.] *WR 151: 40*

Dol'nik, T. V. [DIURNAL AND SEASONAL CYCLES OF BLOOD SUGAR IN SEDENTARY AND MIGRATING BIRDS.] *Zool. Zh.* 52(1): 94-103, illus. 1973. [From Biol. Abstr. 56 (7), 1973. In Russian with English summ.] *WR 151: 40*
"Fringilla coelebs, Passer hispaniolensis, and *Passer domesticus."*

Dolnik, V. [ALTERATION OF BODY FAT BY MIGRATORY FAT DEPOSITION IN *FRINGILLA COELEBS.*] *Dokl. Akad. Nauk SSR* 206(1): 247-249. 1972. [From Bird-Banding 44 (3), 1973. In Russian.] *WR 151: 40*

Ellis, Charles J. SYRINGEAL HISTOLOGY. II. MEADOWLARK *(STURNELLA MAGNA, S. NEGLECTA)*. *Iowa State J. Res.* 48(2): 175-191, 9 figs. Nov. 1973. *WR 151: 40*
[Iowa State Univ., Ames.]

George, William G. MOLT OF JUVENILE WHITE-EYED VIREOS. *Wilson Bull.* 85(3): 327-330. Sept. 1973. *WR 151: 40*
[Southern Ill. Univ., Carbondale.] Variations in the molt and wing loading of juvenile white-eyed vireos *(Vireo griseus)* are discussed.--Courtesy/ Paul A. Stewart.

Hendrickson, H. T., and Marie Yow. THE RELATIONSHIPS OF THE WOOD THRUSH *(HYLOCICHLA MUSTELINA)*: SOME INDICATIONS FROM THE ELECTROPHORESIS OF BLOOD PROTEINS. *Condor* 75(3): 301-305, 2 figs. Autumn 1973. *WR 151: 41*
[Univ. N.C., Greensboro.] Courtesy/ Paul A. Stewart.

Johnston, Richard F., and Robert K. Selander. EVOLUTION IN THE HOUSE SPARROW. III. VARIATION IN SIZE AND SEXUAL DIMORPHISM IN EUROPE AND NORTH AND SOUTH AMERICA. *Am. Nat.* 107(955): 373-390, 5 figs. May-June 1973. *WR 151: 41*
[Univ. Kans., Lawrence.]

Lewis, Robert A., and Donald S. Farner. TEMPERATURE MODULATION OF PHOTOPERIODICALLY INDUCED VERNAL PHENOMENA IN WHITE-CROWNED SPARROWS *(ZONOTRICHIA LEUCOPHRYS)*. *Condor* 75(3): 279-286, 4 figs. Autumn 1973. *WR 151: 41*
[Natl. Ecol. Res. Lab., Corvallis, Oreg.] Environmental temperature appears to have no role in the control of the rate of development of the ovary up to the time of inception of vitellogenesis. If there is any direct modulation of the female gonadal cycle by ambient temperature, it occurs only during the culminative stages of ovarian development. The induction of vernal migratory state, as evidenced by the time of *Zugunruhe*, is favored by moderately high ambient temperature. Prenuptial or at least a prenuptial-like molt appears to be favored by low environmental temperature.--From summ. Courtesy/ Paul A. Stewart.

Long, Charles A. EXPONENTIAL RELATIONS OF STANDARD METABOLIC RATES OF BIRDS AND THE WEIGHTS OF EGGS. *Wilson Bull.* 85(3): 323-326, 1 fig. Sept. 1973. *WR 151: 41*
[Univ. Wis., Stevens Point.] Equations were derived from empirical data relating egg weights and shell weights to standard metabolic rates.--Courtesy/ Paul A. Stewart.

Martin, Donn D., and Albert H. Meier. TEMPORAL SYNERGISM OF CORTICOSTERONE AND PROLACTIN IN REGULATING ORIENTATION IN THE MIGRATORY WHITE-THROATED SPARROW *(ZONOTRICHIA ALBICOLLIS)*. *Condor* 75(4): 369-374. Winter 1973. *WR 151: 41*
[La. State Univ., Baton Rouge.] Oriented nocturnal locomotor activity was induced in migratory white-throated sparrows under the open night sky by injection of hormones. In experiments performed on birds maintained in continuous dim light before and during the vernal migratory season, injections of prolactin administered 4 hr after the time of injections of corticosterone induced locomotor restlessness oriented southward. Injections of prolactin given 12 hr after injections of corticosterone promoted northward orientation. In a study of another group of birds maintained on a 16-hr daily photoperiod in the fall, injections of prolactin 12 hr after the probable daily rise of plasma corticosterone stimulated nocturnal restlessness that was oriented northward. Injections of prolactin at 8 hr after the increase of either exogenous or endogenous corticosterone did not stimulate nocturnal activity. It is concluded that the orientation of migratory activity is controlled by a temporal synergism of corticosterone and prolactin.--Courtesy/ Paul A. Stewart.

Moldenhauer, Ralph R., and Patricia G. Taylor. ENERGY INTAKE BY HYDROPENIC CHIPPING SPARROWS *(SPIZELLA PASSERINA PASSERINA)* MAINTAINED ON DIFFERENT DIETS. *Condor* 75(4): 439-445, 4 figs. Winter 1973. *WR 151: 41*
[Sam Houston State Univ., Huntsville, Tex.] The following are discussed: body weight and water consumption, weight changes during water deprivation, initial effects of water deprivation on energy intake, and prolonged effects of water deprivation.--Courtesy/ Paul A. Stewart.

Niles, David M. GEOGRAPHIC AND SEASONAL VARIATION IN THE OCCURRENCE OF INCOMPLETELY PNEUMATIZED SKULLS IN THE HOUSE SPARROW. *Condor* 75(3): 354-356. Autumn 1973. *WR 151: 41*
[Univ. Kans., Lawrence.] The proportion of house sparrows *(Passer domesticus)* with skulls not completely ossified declined from fall through winter, but it remained constant through the following breeding season.--Courtesy/ Paul A. Stewart.

Olson, Storrs L. A PLUMAGE ABERRATION OF *CARIAMA CRISTATA*. *Auk* 90(4): 912-914, 1 fig. Oct. 1973. *WR 151: 42*
[Smithsonian Inst., Washington, D.C.] Courtesy/ Paul A. Stewart.

Pimm, S. L. THE MOLT OF THE EUROPEAN WHITETHROAT. *Condor* 75(4): 386-391, 2 figs. Winter 1973. *WR 151: 42*
[N. Mex. State Univ., Las Cruces.] It is suggested that some European whitethroats *(Sylvia communis)* migrate southward from Britain before completing their molt. The value of an arrested molt is discussed.--Courtesy/ Paul A. Stewart.

Ponomareva, T. [NEST TEMPERATURES OF SOME BIRD SPECIES IN ARID LANDS.] *Zool. Zh.* 51(12): 1846-1856. 1972. [From Bird-Banding 44(3), 1973. In Russian with English summ.] *WR 151: 42*

Reid, B. NORTH ISLAND BROWN KIWI *(APTERYX AUSTRALIS MANTELLI)*. MEASUREMENTS AND WEIGHTS OF A YOUNG CHICK. *Notornis* 19(3): 261-266. 1972. [From Bird-Banding 44(4), 1973.] *WR 151: 42*

Rijke, A. THE WATER-HOLDING MECHANISMS OF SANDGROUSE FEATHERS. *J. Exp. Biol.* 56(1): 195-200. 1972. [From Bird-Banding 44(4), 1973.] *WR 151: 42*

Rothstein, Stephen I. THE OCCURRENCE OF UNUSUALLY SMALL EGGS IN THREE SPECIES OF SONGBIRDS. *Wilson Bull.* 85(3): 340-342, 1 fig. Sept. 1973. *WR 151: 42*
[Univ. Calif., Santa Barbara.] *"Agelaius phoeniceus, Dumetella carolinensis,* and *Molothrus ater."*--Courtesy/ Paul A. Stewart.

Rothstein, Stephen I. RELATIVE VARIATION OF AVIAN MORPHOLOGICAL FEATURES: RELATION TO THE NICHE. *Am. Nat.* 107(958): 796-799. Nov.-Dec. 1973. *WR 151: 42*
[Univ. Calif., Santa Barbara.]

Rutschke, E. ZUR SUBSTRUKTURE SCHILLERDEN FEDERN BEI PARADIESEVOGELN, AVES, PARADISEIDAE. [ON THE SUBSTRUCTURE OF IRIDESCENT FEATHERS OF BIRDS-OF-PARADISE.] *Z. Wiss. Zool.* 185(1-2): 76-87. 1972. [From Bird-Banding 44(4), 1973. In German with English summ.] *WR 151: 42*

Saiff, Edward Ira. THE MIDDLE BAR OF THE SKULL OF THE AVIAN ORDERS PROCELLARIIFORMES, PELECANIFORMES, SPHENISCIFORMES, AND CICONIIFORMES. *Ph.D. thesis, Rutgers Univ.* 234 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 42*

Sibley, Charles G., and Jon E. Ahlquist. A COMPARATIVE STUDY OF THE EGG WHITE PROTEINS OF NON-PASSERINE BIRDS. *Peabody Mus. Nat. Hist. Yale Univ. Bull.* 39. p. 1-276, illus. 1972. [From Biol. Abstr. 56(5), 1973. In English with French, German and Russian summ.] *WR 151: 42*
[Yale Univ., New Haven, Conn.]

Smith, Susan M. FOOD MANIPULATION BY YOUNG PASSERINES AND THE POSSIBLE EVOLUTIONARY HISTORY OF IMPALING BY SHRIKES. *Wilson Bull.* 85(3): 318-322, 3 figs. Sept. 1973. *WR 151: 42*
[Wellesley Coll., Wellesley, Mass.] Courtesy/ Paul A. Stewart.

Stewart, Paul A. REPLACEMENT OF CAVITY-HUNTING STARLINGS AND HOUSE SPARROWS AFTER REMOVAL. *Wilson Bull.* 85(3): 291-294. Sept. 1973. *WR 151: 42*
[203 Mooreland Dr., Oxford, N.C.] Fifty-six starlings *(Sturnus vulgaris)* and 14 house sparrows *(Passer domesticus)* were captured in a nest box at one location during one nesting season.

Verbeek, Nicolaas A. M. PTERYLOSIS AND TIMING OF MOLT OF THE WATER PIPIT. *Condor* 75(3): 287-292, 6 figs. Autumn 1973. *WR 151: 42*
[Univ. Calif., Berkeley.] *"Anthus spinoletta."*--Courtesy/ Paul A. Stewart.

Warner, R. W. THE ANATOMY OF THE SYRINX IN PASSERINE BIRDS. *J. Zool.* 168: 381-393. 1972. [From Bird-Banding 44(3), 1973.] *WR 151: 43*

BIRDS--BEHAVIOR

Alsop, Fred J. III. NOTES ON THE HOARY REDPOLL ON ITS CENTRAL CANADIAN ARCTIC BREEDING GROUNDS. *Wilson Bull.* 85(4): 484-485. Dec. 1973. *WR 151: 43*
[East Tenn. State Univ., Kingsport.] Copulation and nesting activities of hoary redpolls *(Acanthis hornemanni)* are described.--Courtesy/ Paul A. Stewart.

Bacon, Peter R. HUMMINGBIRD DRINKING SEAWATER. *Auk* 90(4): 917. Oct. 1973. *WR 151: 43*
[Univ. West Indies, Trinidad.] An unidentified hummingbird was watched at close range as it hovered close over the water of an ocean bay and dipped its bill into the water as if drinking.--Courtesy/ Paul A. Stewart.

Baptista, Luis F. LEAF BATHING IN THREE SPECIES OF EMBERIZINES. *Wilson Bull.* 85(3): 346-347. Sept. 1973. *WR 151: 43*
[Max-Planck-Inst. Verhaltensphysiologie, Vogelwarte Radolfzell, Möggingen, den Am Schlossberg, Germany.] The water accumulated on leaves from lawn sprinkling was used by birds for bathing.--Courtesy/ Paul A. Stewart.

Baptista, Luis F. SONG MIMESIS BY A CAPTIVE GOULDIAN FINCH. *Auk* 90(4): 891-894, 1 fig. Oct. 1973. *WR 151: 43*
[Max-Planck-Inst. Verhaltensphysiologie, Vogelwarte Radolfzell, Möggingen, den Am Schlossberg, Germany.] *"Chloebia gouldiae."*--Courtesy/ Paul A. Stewart.

Beck, Benjamin B., Christopher W. Engen, and Peter W. Gelfand. BEHAVIOR AND ACTIVITY CYCLES OF GAMBEL'S QUAIL AND RAPTORIAL BIRDS AT A SONORAN DESERT WATERHOLE. *Condor* 75(4): 466-470, 1 fig. Winter 1973. *WR 151: 43*
[Chicago Zool. Park, Brookfield, Ill.] The presence of raptors at the waterhole was associated with the absence of quail.--Courtesy/ Paul A. Stewart.

Behle, William H. FURTHER NOTES ON ROSY FINCHES WINTERING IN UTAH. *Wilson Bull.* 85(3): 344-346. Sept. 1973. *WR 151: 43*
[Univ. Utah, Salt Lake City.] With miscellaneous observations on rosy finches *(Leucosticte t. tephrocotis, L. t. littoralis,* and *L. atrata).*--Courtesy/ Paul A. Stewart.

Brant, D. M. THE FACTORS INFLUENCING THE SELECTION OF FOOD BY THE HOUSE MARTIN *(DELICHON URBICA* (L.)*).* *J. Anim. Ecol.* 42(3): 539-564, 8 figs. Oct. 1973. *WR 151: 43*
[Univ. Stirling, Stirling, Scotland.] Summary: (1) The diet of nestling house martins in southern England is briefly described. (2) The diet varied seasonally with hemipteran, dipteran and hymenopteran taxa being the most important constituents according to the time of year. (3) The taxonomic composition of the aerial food supply was monitored by use of a suction trap stationed at 40 ft above ground level. (4) The nestlings' diet showed the closest correlation with the available food supply when there was a high relative abundance of large, airborne insects. (5) Changes in the total abundance and diversity of aerial insects and weather conditions were not associated with changes in the intensity of food selection.

Burger, Joanna. COMPETITION BETWEEN AMERICAN COOTS AND FRANKLIN'S GULLS FOR NEST SITES AND EGG PREDATION BY THE COOTS. *Wilson Bull.* 85(4): 449-451. Dec. 1973. *WR 151: 43*
[Rutgers Univ., New Brunswick, N.J.] American coots *(Fulica americana)* were seen eating eggs of Franklin's gulls *(Larus pipixcan),* and 19 gull nests near a coot nest contained pecked eggs.--Courtesy/ Paul A. Stewart.

Cade, Tom J., and Clayton M. White. BREEDING OF SAY'S PHOEBE IN ARCTIC ALASKA. *Condor* 75(3): 360-361. Autumn 1973. *WR 151: 44*
[Cornell Univ., Ithaca, N.Y.] *"Sayornis saya."*--Courtesy/ Paul A. Stewart.

Calder, William A. THE TIMING OF MATERNAL BEHAVIOR OF THE BROAD-TAILED HUMMINGBIRD PRECEDING NEST FAILURE. *Wilson Bull.* 85(3): 283-290, 1 fig. Sept. 1973. *WR 151: 44*
[Univ. Ariz., Tucson.] Nest abandonment of broad-tailed hummingbirds *(Selasphorus platycercus)* was classified as early and late. Early failures were due to infertile eggs and death of chicks; late failures resulted from abandonment of live chicks, thought to be related to decline in the food supply. --Courtesy/ Paul A. Stewart.

Catchpole, Clive K. CONDITIONS OF CO-EXISTENCE IN SYMPATRIC BREEDING POPULATIONS OF *ACROCEPHALUS* WARBLERS. *J. Anim. Ecol.* 42(3): 623-635, 7 figs. Oct. 1973. *WR 151: 44*
[Univ. London, London, England.] Sympatric breeding populations of the reed warbler *(Acrocephalus scirpaceus)* and the sedge warbler *(A. schoenobaenus)* have been studied at the Attenborough Nature Reserve, Nottinghamshire, since 1966. By quantitative study of spatial and temporal patterns, the multidimensional niche occupied by each species was determined, together with the resulting degrees of separation, overlap and possible conditions of competition. The problem of co-existence is discussed in relation to the spatial and temporal separation demonstrated, to wintering ecology in Africa, and to studies on similar sympatric species. Some speculations are advanced concerning the evolution of *Acrocephalus* warblers and their ecology.--From summ.

Cheylan, G. LA NIDIFICATION DU MERLE DE ROCHE *MONTICOLA SAXATILIS* (L.) A LA MONTAGNE SAINTE-VICTOIRE. [THE NESTING OF THE ROCK THRUSH *(MONTICOLA SAXATILIS)* (L.) ON SAINTE-VICTOIRE MOUNTAIN.] *Alauda* 41(1/2): 85-89, illus. 1973. [From Biol. Abstr. 56(9), 1973. In French.] *WR 151: 44*
[6 rue de Littera, Aix-en-Provence, France.]

Colwell, Robert K. COMPETITION AND COEXISTENCE IN A SIMPLE TROPICAL COMMUNITY. *Am. Nat.* 107(958): 737-760, 5 figs. Nov.-Dec. 1973. *WR 151: 44*
[Univ. Calif., Berkeley.] An analysis is presented of the evolutionary and ecological interactions among 10 species in a Costa Rican highland community: two *Rhinosseius* species, three hummingbirds, a coerebid bird, and four hummingbird-pollinated plants.--From summ.

Conner, Richard N. SCREECH OWL DISPLACES NESTING PILEATED WOODPECKERS. *Bird-Banding* 44(4): 316. Autumn 1973. *WR 151: 44*
[Va. State Univ., Blacksburg.] *"Dryocopus pileatus* and *Otus asio."*--Courtesy/ Paul A. Stewart.

Cruz, Alexander. FOOD AND FORAGING ECOLOGY OF THE JAMAICAN BECARD. *Auk* 90 (4): 905-906. Oct. 1973. *WR 151: 44*
[Univ. Colo., Boulder.] Jamaican becards *(Platypsaris niger)* obtained food by gleaning from foliage, hawking, and by snatching food from vegetation when hovering near it.--Courtesy/ Paul A. Stewart.

Davis, Steven, Betty S. Davis, and John Davis. SOME FACTORS AFFECTING FORAGING BEHAVIOR OF PLAIN TITMICE. *Condor* 75(4): 481-482. Winter 1973. *WR 151: 44*
[Univ. Calif., Carmel Valley.] The influence of position of the feeding tray, seed size, seed pattern, and color preference on feeding behavior of *Parus inornatus* is discussed.--Courtesy/ Paul A. Stewart.

De Bruyn, Gerrit J., Lenie Goosen-De Roo, Ans I. M. Hubregtse-Van Den Berg, and Hans R. Feijen. PREDATION OF ANTS BY WOODPECKERS. *Ekol. Pol.* 20(9): 83-90, illus. 1972. [From Biol. Abstr. 56(8), 1973.] *WR 151: 44*
[State Univ. Leiden, Leiden, Netherlands.] *"Picus viridis."*

Duncan, Stewart. WINTER SINGING OF THE PURPLE FINCH IN MASSACHUSETTS. *Auk* 90(4): 914-915. Oct. 1973. *WR 151: 45*
[Boston Univ., Boston, Mass.] *"Carpodacus purpureus."*--Courtesy/ Paul A. Stewart.

Efremov, V., and V. Paevskii. [INCUBATION BEHAVIOR AND INCUBATION PATCHES OF MALES IN FIVE SPECIES OF GENUS *SYLVIA.*] *Zool. Zh.* 52(5): 721-827. 1973. [From Bird-Banding 44(4), 1973. In Russian with English summ.] *WR 151: 45*

Eichorn, B. VÖGEL UNTER DER MITTERNACHTSSONNE. [BIRDS UNDER THE MIDNIGHT SUN.] *Kosmos* 69(3): 109-112. 1973. [From Bird-Banding 44(4), 1973. In German.] *WR 151: 45*

Epting, Robert J., and Timothy M. Casey. POWER OUTPUT AND WING DISC LOADING IN HOVERING HUMMINGBIRDS. *Am. Nat.* 107(958): 761-765, 1 fig. Nov.-Dec. 1973. *WR 151: 45*
[Univ. Calif., Los Angeles.]

Freeland, David B. SOME FOOD PREFERENCES AND AGGRESSIVE BEHAVIOR BY MONK PARAKEETS. *Wilson Bull.* 85(3): 332-334. Sept. 1973. *WR 151: 45*
[336 Earlwood Rd., Pittsburgh, Pa.] A successful nesting at Pittsburgh, Pennsylvania of a pair of monk parakeets *(Myiopsitta monachus)*, including interactions with house sparrows *(Passer domesticus)* was described. The preferred food was whole corn, pecked from the cob.--Courtesy/ Paul A. Stewart.

Giltz, Maurice L. THE PURPLE FINCH NESTS IN CENTRAL OHIO. *Wilson Bull.* 85 (3): 350-351. Sept. 1973. *WR 151: 45*
[Ohio State Univ., Columbus.] *"Carpodacus purpureus."*--Courtesy/ Paul A. Stewart.

Hailman, Jack P. DOUBLE-SCRATCHING AND TERRESTRIAL LOCOMOTION IN EMBERIZINES: SOME COMPLICATIONS. *Wilson Bull.* 85(3): 348-350. Sept. 1973. *WR 151: 45*
[Univ. Wis., Madison.] Courtesy/ Paul A. Stewart.

Harrington, Brian A. AGGRESSION IN WINTER RESIDENT AND SPRING MIGRANT WHITE-THROATED SPARROWS IN MASSACHUSETTS. *Bird-Banding* 44(4): 314-315. Autumn 1973. *WR 151: 45*
[Manomet Bird Observatory, Manomet, Mass.] *"Zonotrichia albicollis."*--Courtesy/ Paul A. Stewart.

Huber, Michael R., and James B. Cope. HOUSE SPARROW DISPOSSESSES NESTING EASTERN KINGBIRDS. *Wilson Bull.* 85(3): 339. Sept. 1973. *WR 151: 45*
[Earlham Coll., Richmond, Ind.] The kingbird *(Tyrannus tyrannus)* nest was under construction when it was taken over by a male house sparrow *(Passer domesticus)*.--Courtesy/ Paul A. Stewart.

Kilham, Lawrence. COLONIAL-TYPE NESTING IN YELLOW-SHAFTED FLICKERS AS RELATED TO STAGGERING OF NESTING TIMES. *Bird-Banding* 44(4): 317-318, 1 fig. Autumn 1973. *WR 151: 45*
[Dartmouth Med. School, Hanover, N.H.] *"Colaptes auratus."*--Courtesy/ Paul A. Stewart.

Kilham, Lawrence. UNUSUAL ATTACK OF INTRUDING MALE ON A NESTING PAIR OF PILEATED WOODPECKERS. *Condor* 75(3): 349-350. Autumn 1973. *WR 151: 45*
[Dartmouth Med. School, Hanover, N.H.] An intruding pileated woodpecker *(Dryocopus pileatus)* temporarily occupied a nest cavity against the resistance of both members of the pair making and preparing to use the cavity.--Courtesy/ Paul A. Stewart.

Klomp, H. REGULATION OF THE SIZE OF BIRD POPULATIONS BY MEANS OF TERRITORIAL BEHAVIOUR. *Neth. J. Zool.* 22(4): 456-488, illus. 1972. [From Biol. Abstr. 56 (6), 1973.] *WR 151: 45*
[Res. Inst. Nat. Manage., Arnhem, Netherlands.]

Kondla, Norbert G., and Harold W. Pinel. BREEDING RECORDS OF 19 SPECIES OF BIRDS IN SOUTHERN ALBERTA. *Blue Jay* 31(3): 153-157, illus. Sept. 1973. *WR 151: 46*
[Box 1284, 1017 - 19th Ave. N.W., Calgary, Alberta, Canada.]

Larsen, Bjorn. HEKKENDE ROSENFINK, *CARPODACUS ERYTHRINUS*, VED LILLEHAMMER 1972. [NESTING SCARLET ROSE FINCH, *CARPODACUS ERYTHRINUS*, NEAR LILLEHAMMER, OPPLAND COUNTY 1972.] *Fauna* (Oslo) 26(1): 67-69, illus. 1973. [From Biol. Abstr. 56(9), 1973. In Norwegian with English summ.] *WR 151: 46*
[Bjornlandsvei 2, Gralum, Norway.]

Leck, Charles F. A HOUSE SPARROW ROOST IN LIMA, PERU. *Auk* 90(4): 888, 1 fig. Oct. 1973. *WR 151: 46*
[Rutgers Univ., New Brunswick, N.J.] A roosting congregation of house sparrows *(Passer domesticus)* contained about 6,000 birds.--Courtesy/ Paul A. Stewart.

Ligon, J. David. FORAGING BEHAVIOR OF THE WHITE-HEADED WOODPECKER IN IDAHO. *Auk* 90(4): 862-869, 2 figs. Oct. 1973. *WR 151: 46*
[Univ. N. Mex., Albuquerque.] Unlike the situation with many species of North American woodpeckers, no sexual difference in feeding behavior was found in white-headed woodpeckers *(Dendrocopos albolarvatus)*.--Courtesy/ Paul A. Stewart.

Loncke, Daniel J., and J. Bruce Falls. AN ATTEMPTED THIRD BROOD IN THE WHITE-THROATED SPARROW. *Auk* 90(4): 904. Oct. 1973. *WR 151: 46*
[Univ. Toronto, Toronto, Ontario, Canada.] *"Zonotrichia albicollis."*--Courtesy/ Paul A. Stewart.

Lund, H. Munthe-Kaas. STREKK-MYTING HOS HONSEFUGL. [CASTING OF FEATHERS: A FRIGHT PHENOMENON.] *Fauna* (Oslo) 26(1): 70. 1973. [From Biol. Abstr. 56(9), 1973. In Norwegian with English summ.] *WR 151: 46*
[Zool. Mus., Oslo, Norway.] The casting of feathers in connection with the capture of *Phasianus colchicus, Lyrurus tetrix* and *Tetrao urogallus* is mentioned. This phenomenon is probably connected with fear.

Lyon, David L. TERRITORIAL AND FEEDING ACTIVITY OF BROAD-TAILED HUMMINGBIRDS *(SELASPHORUS PLATYCERCUS)* IN *IRIS MISSOURIENSIS*. *Condor* 75(3): 346-349, 1 fig. Autumn 1973. *WR 151: 46*
[Cornell Coll., Mt. Vernon, Iowa.] Males held feeding territories during June and drove out competitors (including bees).--Courtesy/ Paul A. Stewart.

Marti, Carl D. HOUSE SPARROWS FEEDING YOUNG AT NIGHT. *Wilson Bull.* 85(4): 483. Dec. 1973. *WR 151: 46*
[Weber State Coll., Ogden, Utah.] House sparrows *(Passer domesticus)* both collected food and fed their young within an artificially lighted area.--Courtesy/ Paul A. Stewart.

Monroe, Burt L., Jr. WING-FLASHING IN THE BLACK-AND-WHITE FANTAIL *(RHIPIDURA LEUCOPHRYS)*. *Wilson Bull.* 85(3): 340. Sept. 1973. *WR 151: 46*
[Univ. Louisville, Louisville, Ky.] Reports mimid-type wing flashing in a non-mimid.--Courtesy/ Paul A. Stewart.

Olivares, Antonio, and J. A. Munves. PREDATORY BEHAVIOR OF SMOOTH-BILLED ANI. *Auk* 90(4): 891. Oct. 1973. *WR 151: 46*
[Univ. Nacional, A. Aereo 7495, Bogota, DE, Colombia.] A smooth-billed ani *(Crotophaga ani)* removed a nestling vermilion flycatcher *(Pyrocephalus rubinus)* from its nest.--Courtesy/ Paul A. Stewart.

Payne, R. B. VOCAL MIMICRY OF THE PARADISE WHYDAHS *(VIDUA)* AND RESPONSE OF FEMALE WHYDAHS TO THE SONGS OF THEIR HOSTS *(PYTILIA)* AND THEIR MIMICS. *Anim. Behav.* 21(4): 762-771, 5 figs. Nov. 1973. *WR 151: 46*
[Univ. Mich., Ann Arbor.] *"Vidua paradiseaea* and *Pytilia melba."*

Payne, Robert B. INDIVIDUAL LAYING HISTORIES AND THE CLUTCH SIZE AND NUMBERS OF EGGS OF PARASITIC CUCKOOS. *Condor* 75(4): 414-438, 9 figs. Winter 1973. *WR 151: 47*
[Univ. Mich., Ann Arbor.] Ovaries and oviducts of 9 spp. of brood parasitic cuckoos collected in Africa were examined. Eggs were usually laid on alternate days. Clutch size was highly variable in the different species. The mean clutch size in all species was between two and four. Most southern African cuckoos have breeding seasons of about ten weeks, laying 16-26 eggs in a season. --From summ. Courtesy/ Paul A. Stewart.

Ponomareva, T. S. [CASES OF GREAT TITMOUSE NESTING IN ATYPICAL CONDITIONS.] *Byull. Mosk. O-va Ispyt. Prir. Otd. Biol.* 77(5): 77-79, illus. 1972. [From Biol. Abstr. 56(9), 1973. In Russian.] *WR 151: 47*

Powell, Robert W. TIME-BASED RESPONDING IN PIGEONS AND CROWS. *Auk* 90(4): 803-808, 3 figs. Oct. 1973. *WR 151: 47*
[Univ. South Fla., Tampa.] Common crows *(Corvus brachyrhynchos)* performed more efficiently than rock doves *(Columba livia)* in both fixed interval and differential reinforcement of low rate tests.--Courtesy/ Paul A. Stewart.

Price, Frank E., and Carl E. Bock. POLYGYNY IN THE DIPPER. *Condor* 75(4): 457-459. Winter 1973. *WR 151: 47*
[Univ. Colorado, Boulder.] *"Cinclus mexicanus."*--Courtesy/ Paul A. Stewart.

Rea, Amadeo. INTERORDINAL COPULATION ON COASTAL VENEZUELA. *Wilson Bull.* 85 (3): 337-338. Sept. 1973. *WR 151: 47*
[Prescott Coll., Prescott, Ariz.] A *Myiozetetes* flycatcher was seen to copulate, seemingly successfully, with a ruddy ground dove *(Columbina talpacoti)*. --Courtesy/ Paul A. Stewart.

Rhijn, J. G. van. BEHAVIOURAL DIMORPHISM IN MALE RUFFS, *PHILOMACHUS PUGNAX* (L.). *Behaviour* 47(3-4): 153-229, 15 figs. 1973. In English with French summ. *WR 151: 47*
[Univ. Groningen, Groningen, Netherlands.]

Rothstein, Stephen I. OBSERVATION AND EXPERIMENT IN THE ANALYSIS OF INTERACTIONS BETWEEN BROOD PARASITES AND THEIR HOSTS. *Am. Nat.* 105(941): 71-74. Jan.-Feb. 1971. *WR 151: 47*
[Chesapeake Bay Cent. Environ. Studies, Rt. 4, Box 622, Edgewater, Md.]

Short, L. L. "WOODPECKING" BY A RED-THROATED BARBET. *Auk* 90(4): 909-910. Oct. 1973. *WR 151: 47*
[Am. Mus. Nat. Hist., New York, N.Y.] A red-throated barbet *(Megalaima mystacophanos)* was seen foraging in woodpecker fashion, extracting insects from shallow pits in wood.--Courtesy/ Paul A. Stewart.

Simochko, M. [SOME FEATURES OF CAVITY-NESTING BIRDS' PREFERENCES IN TRANSCARPATHIA.] *Vestn. Zool.* 7(1): 11-14. 1973. [From Bird-Banding 44(3), 1973. In Russian.] *WR 151: 47*

Snow, Barbara K. NOTES ON THE BEHAVIOR OF THE WHITE BELLBIRD. *Auk* 90(4): 743-751, 1 fig. Oct. 1973. *WR 151: 47*
[Old Forge, Wingrave, Aylesbury, Buckinghamshire, England.]
Movements, calls, flight display, and visiting behavior of the white bellbird *(Procnias alba)* are described and comparisons of its behavior with that of the bearded bellbird *(P. averano)* are made.--Courtesy/ Paul A. Stewart.

Soeske, P. [SONARMICROSCOPY AND BIOLOGICAL MUSICALITY OF BIRD SOUNDS.] *Vestn. Mosk. Univ. Ser. Biol.* 8(1): 28-36. 1973. [From Bird-Banding 44(4), 1973. In Russian.] *WR 151: 47*

Tate, D. Jean Ridinger. HABITAT USAGE BY THE CHIPPING SPARROW *(SPIZELLA PASSERINA)* IN NORTHERN LOWER MICHIGAN. *Univ. Nebr.* (Lincoln). 417 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 48*

Tate, James, Jr. METHODS AND ANNUAL SEQUENCE OF FORAGING BY THE SAPSUCKER. *Auk* 90(4): 840-856, 7 figs. Oct. 1973. *WR 151: 48*
[Cornell Univ., Ithaca, N.Y.] *"Sphyrapicus varius varius."*--Courtesy/ Paul A. Stewart.

Wabakken, Petter. OBSERVASJONER FRA GRASPETT- OG TRETASPETTREIR. [OBSERVATIONS AT NESTS OF GREY-HEADED AND THREE-TOED WOODPECKERS.] *Fauna* (Oslo) 26 (1): 1-6, illus. 1973. [From Biol. Abstr. 56(9), 1973. In Norwegian with English summ.] *WR 151: 48*
[Bergknappen 5, Gjettum, Norway.]

West, George C. FOODS EATEN BY TREE SPARROWS IN RELATION TO AVAILABILITY DURING SUMMER IN NORTHERN MANITOBA. *Arct. J. Arct. Inst. North Am.* 26(1): 7-21, illus. 1973. [From Biol. Abstr. 56(9), 1973. In English with French and Russian summ.] *WR 151: 48*
[Univ. Alaska, Fairbanks.]

Weydemeyer, Winton. SINGING HABITS OF TRAILL'S FLYCATCHER IN NORTHWESTERN MONTANA. *Wilson Bull.* 85(3): 276-282. Sept. 1973. *WR 151: 48*
[Fortine, Mont.] Song types, seasonal variation in singing habits, influences of weather on singing behavior, hours of singing, and flight song of *Empidonax traillii* are discussed.--Courtesy/ Paul A. Stewart.

Winkler, Hans. BEITRAEGE ZUR ETHOLOGIE DES BLUTSPECHTS *(DENDROCOPOS SYRIACUS)*: DAS NICHT-REPRODUKTIVE VERHALTEN. [CONTRIBUTIONS TO THE ETHOLOGY OF THE SYRIAN WOODPECKER *(DENDROCOPOS SYRIACUS)*: NON-REPRODUCTIVE BEHAVIOUR.] *Z. Tierpsychol.* 31(3): 300-325, illus. 1972. [From Biol. Abstr. 56(5), 1973. In German with English summ.] *WR 151: 48*
[A-2295 Oberweiden 37, Austria.]

BIRDS--MIGRATION & BANDING REPORTS

Able, Kenneth P. THE ROLE OF WEATHER VARIABLES AND FLIGHT DIRECTION IN DETERMINING THE MAGNITUDE OF NOCTURNAL BIRD MIGRATION. *Ecology* 54(5): 1031-1041, 4 figs. Late Summer 1973. *WR 151: 48*
[State Univ. N.Y., Albany.] Data gathered by use of weather surveillance radar and visual observations indicated that passerine birds flew with the wind regardless of its direction. As a result they frequently flew in seasonally inappropriate directions. The efficiency of downwind flight is enhanced by the facts that average winds blow roughly in the migratory directions of the birds and that the birds show behavioral selection in terms of the wind directions and synoptic weather situations in which they initiate migration.--From summ. Courtesy/ Paul A. Stewart.

Blokpoel, Hans. BIRD MIGRATION FORECASTS FOR MILITARY AIR OPERATIONS. *Can. Wildl. Serv. Occas. Pap.* no. 16. 18 p., 5 figs. 1973. In English with French summ. *WR 151: 48*
A system for predicting density of bird migration was developed for use in reducing the number of in-flight bird-strikes (collisions between birds and aircraft) near Canadian Forces Base Cold Lake, in east-central Alberta. Results and shortcomings of the forecast system are discussed.--From abstr.

Bruderer, B., and E. Weitnauer. RADARBEOBACHTUNGEN ÜBER ZUG UND NACHTFLÜGE DES MAUERSEGLERS *(APUS APUS)*. [RADAR OBSERVATIONS OF MIGRATION AND NIGHT FLIGHT OF SWIFTS.] *Rev. Suisse Zool.* 79(4): 1189-1200. 1972. [From Bird-Banding 44 (4), 1973. In German with English summ.] *WR 151: 48*

Buskirk, William H. FOUR NEW MIGRANTS FOR COSTA RICA. *Condor* 75(3): 363-364. Autumn 1973. *WR 151: 49*
[Univ. Calif., Davis.] *"Vireo solitarius, Dendroica occidentalis, D. townsendi,* and *Dolichonyx oryzivorus."*--Courtesy/ Paul A. Stewart.

Busse, Przemyslaw. AUTUMN MIGRATION OF THE REDSTART, *PHOENICURUS PHOENICURUS* (L.) ALONG THE POLISH COAST OF THE BALTIC. *Acta Ornithol.* (Warsaw) 13(6): 193-241, illus. 1972. [From Biol. Abstr. 56(7), 1973. In English with Polish and Russian summ.] *WR 151: 49*

Clench, Mary Heimerdinger. THE FALL MIGRATION ROUTE OF KIRTLAND'S WARBLER. *Wilson Bull.* 85(4): 417-428, 4 figs. Dec. 1973. *WR 151: 49*
[Carnegie Mus., Pittsburgh, Pa.] Recent records of Kirtland's warblers *(Dendroica kirtlandii)* indicate that movement from the breeding to the wintering ground is not on a straight line as had been indicated by earlier records.--Courtesy/ Paul A. Stewart.

Cowardin, Lewis M., and D. Alan Davenport. COMPUTERIZED SYSTEM FOR ORGANIZING AND MAINTAINING FILES OF BANDING DATA. *Bird-Banding* 44(3): 187-195, 5 figs. Summer 1973. *WR 151: 49*
[Northern Prairie Wildl. Res. Cent., Jamestown, N. Dak.] Courtesy/ Paul A. Stewart.

Dexter, Ralph W. SOME BIRD BANDING RECORDS OF MAJ. ROY H. SMITH AT KENT, OHIO, 1922-50. *Inland Bird Banding News* 45(6): 218-220. Nov.-Dec. 1973. *WR 151: 49*
[Kent State Univ., Kent, Ohio.]

Diamond, A. W., and R. W. Smith. RETURNS AND SURVIVAL OF BANDED WARBLERS WINTERING IN JAMAICA. *Bird-Banding* 44(3): 221-224. Summer 1973. *WR 151: 49*
[Intern. Council for Bird Preservation, Counsin Island via Praslin, Seychelles.] Courtesy/ Paul A. Stewart.

Dol'nik, V. R., and V. M. Gavrilov. [PHOTOPERIODIC CONTROL OF ANNUAL CYCLES OF THE CHAFFINCH, A TEMPERATE-ZONE MIGRANT.] *Zool. Zh.* 51(11): 1685-1696, illus. 1972. [From Biol. Abstr. 56(5), 1973. In Russian with English summ.] *WR 151: 49*
"Fringilla coelebs."

Ely, Charles A. RETURNS OF NORTH AMERICAN BIRDS TO THEIR WINTERING GROUNDS IN SOUTHERN MEXICO. *Bird-Banding* 44(3): 228-229. Summer 1973. *WR 151: 49*
[Fort Hays Kans. State Coll., Hays.] Courtesy/ Paul A. Stewart.

Flock, Warren L. RADAR OBSERVATIONS OF BIRD MOVEMENTS ALONG THE ARCTIC COAST OF ALASKA. *Wilson Bull.* 85(3): 259-275, 8 figs. Sept. 1973. *WR 151: 49*
[Univ. Colo., Boulder.] Distant early warning radars were used to study bird movements, and a westward movement of eiders during the summer was shown.--Courtesy/ Paul A. Stewart.

Hilditch, Christopher D. M., Timothy C. Williams, and Ian C. T. Nisbet. AUTUMNAL BIRD MIGRATION OVER ANTIGUA, W.I. *Bird-Banding* 44(3): 171-179, 2 figs. Summer 1973. *WR 151: 49*
[State Univ. N.Y., Buffalo.] Both tracking and weather radars were used. The direction and density of migrating birds varied from day to day. Birds sometimes flew crosswind. Some birds flew as high as 6,000 m, and few flew below 1,500 m. --Courtesy/ Paul A. Stewart.

Johnson, Ned K. SPRING MIGRATION OF THE WESTERN FLYCATCHER, WITH NOTES ON SEASONAL CHANGES IN SEX AND AGE RATIOS. *Bird-Banding* 44(3): 205-220, 2 figs. Summer 1973. *WR 151: 49*
[Univ. Calif., Berkeley.] *"Empidonax difficilis."*--Courtesy/ Paul A. Stewart.

BIRDS--MIGRATION & BANDING REPORTS--Continued

Laskey, Amelia R. A LONGEVITY AND ROUND TRIP RECORD OF PURPLE FINCHES. *Bird-Banding* 44(3): 227. Summer 1973. *WR 151: 50*
[1721 Graybar Lane, Nashville, Tenn.] *"Carpodacus purpureus."*--Courtesy/ Paul A. Stewart.

Mewaldt, L. Richard, Lloyda T. Cowley, and Pyong-Oh Won. CALIFORNIA SPARROWS FAIL TO RETURN FROM DISPLACEMENT TO KOREA. *Auk* 90(4): 857-861. Oct. 1973. *WR 151: 50*
[Calif. State Univ., San Jose.] *"Zonotrichia leucophrys gambelii, Z. l. pugetensis,* and *Z. atricapilla."*--Courtesy/ Paul A. Stewart.

Morel, Gérard, and Francis Roux. LES MIGRATEURS PALEARCTIQUES AU SENEGAL: NOTES COMPLEMENTAIRES. [THE PALAEARCTIC MIGRANTS OF SENEGAL: SUPPLEMENTARY NOTES.] *Terre Vie* 1973(4): 523-545. Oct.-Dec. 1973. In French with English summ. *WR 151: 50*

Papi, F., L. Fiore, V. Fiaschi, and S. Benvenuti. AN EXPERIMENT FOR TESTING THE HYPOTHESIS OF OLFACTORY NAVIGATION OF HOMING PIGEONS. *J. Comp. Physiol.* 83 (1): 93-102, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 50*
[Univ. Pisa, Pisa, Italy.]

Patterson, Barbara N. MORE ON ONE-NIGHT MILEAGE OF MIGRANTS. *Bird-Banding* 44(3): 227-228. Summer 1973. *WR 151: 50*
[Somesville, Mount Desert, Me.] Four pine siskins *(Spinus pinus)* traveled northward 96 miles, presumably together, in a maximum of 16 hours.--Courtesy/ Paul A. Stewart.

Salvadori, Antonio, and Kenneth A. Youngstrom. A SYSTEM SURVEY OF A BIRD OBSERVATORY: PART I. A RECORDING FORM FOR BANDING DATA. *Bird-Banding* 44(4): 249-257, 2 figs. Autumn 1973. *WR 151: 50*
[Univ. Guelph, Guelph, Ontario, Canada.] Courtesy/ Paul A. Stewart.

Strnad, Forest. BANDING RUBY-THROATED HUMMINGBIRDS IN MINNESOTA. *Inland Bird Banding News* 45(6): 215-217. Nov.-Dec. 1973. *WR 151: 50*
[303 Second St. N.W., Stewartville, Minn.] Analysis of 15 years' records.

Weydemeyer, Winton. THE SPRING MIGRATION PATTERN AT FORTINE, MONTANA. *Condor* 75(4): 400-413. Winter 1973. *WR 151: 50*
[Fortine, Mont.] Data are given for 138 spp. including seasonal status, number of years recorded, average, earliest, and latest dates of first arrival, and seasonal variation in arrival dates by five-day periods. There is also some discussion on the duration of migration, influence of weather on migration time, relation of feeding habits to arrival time, March arrival dates, arrival pattern of the tree swallow, and relation of winter range to arrival time.--Courtesy/ Paul A. Stewart.

BIRDS--MANUALS, FAUNAS, COMMUNITIES

Abdulali, Humayun. A CATALOGUE OF THE BIRDS IN THE COLLECTION OF THE BOMBAY NATURAL HISTORY SOCIETY: 12 (CONTINUED). *J. Bombay Nat. Hist. Soc.* 69(2): 378-389. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 50*

Bendiksen, Fredrik S. BJARKOY KOMMUNES FUGLEFAUNA. [AVIFAUNA OF BJARKOY MUNICIPAL.] *Fauna* (Oslo) 26(1): 7-23, illus. 1973. [From Biol. Abstr. 56(9), 1973. In Norwegian with English summ.] *WR 151: 50*
[Bjarkoy, Norway.]

Binford, Laurence C. VIRGINIA RAIL AND CAPE MAY WARBLER IN CHIAPAS, MEXICO. *Condor* 75(3): 350-351. Autumn 1973. *WR 151: 50*
[Calif. Acad. Sci., Golden Gate Park, San Francisco.] *"Rallus limicola* and *Dendroica tigrina."*--Courtesy/ Paul A. Stewart.

Dyrcz, Andrzej, Jerzy Okulewicz, Ludwik Tomialojc, and Jozef Witkowski. ORNITOFAUNA LEGOWA BAGIEN BIEBRZANSKICH I TERENOW PRZYLEGLYCH. [BREEDING AVIFAUNA OF THE BIEBRZA MARSHES AND ADJACENT TERRITORIES.] *Acta Ornithol.* (Warsaw) 13(11): 343-422, illus. 1972. [From Biol. Abstr. 56(8), 1973. In Polish with Russian and English summ.] *WR 151: 51*
[Univ. Wroclaw, Wroclaw, Poland.]

Elgmork, Kare. ET UVANLIG GAUPESPOR OG LITT OM GAUPE I VASSFARTRAKTENE 1960-69. [AN ATYPICAL TRACK OF LYNX AND SOME OBSERVATIONS OF LYNX IN THE VASSFARET 1960-69.] *Fauna* (Oslo) 25(4): 258-264, illus. 1972. [From Biol. Abstr. 56(7), 1973. In Norwegian with English summ.] *WR 151: 51*
"Lynx lynx."

Eybert, Marie-Christine. LE CYCLE ANNUEL DES OISEAUX DANS TROIS STADES EVOLUTIFS D'UNE PINEDE DE BRETAGNE. [THE ANNUAL CYCLE OF BIRDS FOR THREE DEVELOPING STAGES OF PINE WOODS IN BRITTANY.] *Terre Vie* 1973(4): 507-522, 2 figs. Oct.-Dec. 1973. In French with English summ. *WR 151: 51*
[Stn. Biol. Paimpont, Plelan-le-Grand, France.]

Fog, Jorgen, and Leo Kortegaard. YNGLEFUGLE I VEJLERNE OMKRING 1971. [BREEDING BIRDS IN VEJLERNE ABOUT 1971.] *Flora Fauna* 79(1): 15-22, illus. 1973. [From Biol. Abstr. 56(9), 1973. In Danish with English summ.] *WR 151: 51*
[Vildtbiol. Stn., Kalo, Ronde, Denmark.]

Galloway, B., E. R. Meek, and I. H. Armstrong. BIRDS IN NORTHUMBRIA / 1972 REPORT OF THE TYNESIDE BIRD CLUB. *Tyneside Bird Club.* 77 p., [1 fig.]. 1973. Price 60d. *WR 151: 51*
Includes a monthly summary, a classified list, and a report on banding activities.

Gochfeld, Michael. OBSERVATIONS ON NEW OR UNUSUAL BIRDS FROM TRINIDAD, WEST INDIES, AND COMMENTS ON THE GENUS *PLEGADIS* IN VENEZUELA. *Condor* 75(4): 474-478. Winter 1973. *WR 151: 51*
[Am. Mus. Nat. Hist., New York, N.Y.] The regional status of 14 spp. is discussed.--Courtesy/ Paul A. Stewart.

Haneda, Kenzo, Toru Nakamura, and Satoshi Yamagishi. [ECOLOGICAL STUDY OF THE BIRD COMMUNITY IN OTANOMOSU PLATEAU, SHIGA V.] *Bull. Inst. Nat. Educ. Shiga Heights* 10. p. 25-34, illus. 1971. [From Biol. Abstr. 56(8), 1973. In Japanese with English summ.] *WR 151: 51*
[Shinshu Univ., Matsumoto, Nagano, Japan.]

Harmata, Wincenty. PTAKI REZERWATU LEZCZAK KOLO RACIBORZA W WOJEWODZTWIE OPOLSKIM. [BIRDS OF THE LEZCZAK RESERVE NEAR RACIBORZ IN THE OPOLE PROVINCE.] *Acta Zool. Cracov.* 17(10): 239-271, illus. 1972. [From Biol. Abstr. 56(9), 1973. In Polish with Russian and English summ.] *WR 151: 51*
[Jagiellonian Univ., Cracow, Poland.]

Harris, M. P. THE GALÁPAGOS AVIFAUNA. *Condor* 75(3): 265-278, 2 figs. Autumn 1973. *WR 151: 51*
[Oxford Univ., Oxford, England.] Details are given of the past and present status of all birds recorded in the Galápagos archipelago.--Courtesy/ Paul A. Stewart.

Hooper, Robert G., Hewlette S. Crawford, and Richard F. Harlow. BIRD DENSITY AND DIVERSITY AS RELATED TO VEGETATION IN FOREST RECREATIONAL AREAS. *J. For.* 71(12): 766-769, 4 figs. Dec. 1973. *WR 151: 51*
[Southeastern Forest Exp. Stn., Blacksburg, Va.] Abstract: Forty-nine species of birds were found nesting in 30 forest recreational areas in the Southern Appalachians. The percentage of cover provided by foliage less than

12 feet high accounted for 56 percent of the variation in densities of nesting birds. The mixture of coniferous and deciduous foliage more than 12 feet high accounted for 66 percent of the variation in the diversity of birds. Clumping of understory shrubs is important to birds in open, parklike recreational areas. Recommendations for managing forest recreational areas for reasonably dense and diverse bird populations are compatible with major management goals.

Hunn, Eugene. NOTEWORTHY BIRD OBSERVATIONS FROM CHIAPAS, MÉXICO. *Condor* 75 (4): 483. Winter 1973. *WR 151: 52*
[Univ. Wash., Seattle.] Notes on 8 spp.--Courtesy/ Paul A. Stewart.

Jablonski, Boleslaw. THE PHENOLOGICAL INTERCHANGE OF BIRD COMMUNITIES IN AGRICULTURAL BIOTOPES IN THE EASTERN PART OF THE MASOVIAN LOWLAND REGION. *Acta Ornithol.* (Warsaw) 13(8): 281-321, illus. 1972. [From Biol. Abstr. 56(7), 1973. In English with Polish and Russian summ.] *WR 151: 52*
[Inst. Zool., Pol. Akad. Nauk, Wilcza 64, Warsaw, Poland.]

Kemper, Charles A. BIRDS OF CHIPPEWA, EAU CLAIRE, AND NEIGHBORING COUNTIES. [PART ONE.] *Passenger Pigeon* 35(2): 55-91, illus. Summer 1973. *WR 151: 52*
Annotated checklist.

Kemper, Charles A. BIRDS OF CHIPPEWA, EAU CLAIRE, AND NEIGHBORING COUNTIES. [PART TWO.] *Passenger Pigeon* 35(3): 107-129, illus. Fall 1973. *WR 151: 52*
Second of two installments.

Kumari, E., and others. MATSALU MAASTIK JA LINNUD / ORNITOLOOGILINE KOGUMIK VI. [LANDSCAPE AND BIRDS OF MATSALU.] *Izdat. "Valgus"* (Tallinn). 167 p., illus. 1973. Papers in Estonian with Russian and English summ. Price 1 ruble 35 kopecks. *WR 151: 52*
Contents: *The specific character of the Matsalu landscape and bird fauna*, E. Kumari; *The investigation of the Matsalu Bay*, O. Renno; *The formation of natural complexes of the Matsalu landscape in the course of the last 100 years*, E. Kumari; *Vegetation of the flood plains in the lower course of the Kasari River*, K. Pork; *History of the greylag goose population in West Estonia*, V. Paakspuu; *The dynamics of gull colonies in the Matsalu State Nature Reserve*, V. Paakspuu; *Time of the nesting of the tufted duck in the Matsalu State Nature Reserve*, E. Kastepõld; *The migration of the waders in the western part of the Matsalu Bay*, A. Jõgi; *Recent changes in the bird fauna of the Matsalu Bay*, O. Renno; *The role of ornithochory on the islets of the Matsalu State Nature Reserve*, H. Rebassoo; *The present-day of the Matsalu State Nature Reserve*, V. Seger and V. Paakspuu; *Problems of nature conservation in the Matsalu State Nature Reserve*, S. Onno; and *The Matsalu Bay as a base of international importance for research and nature conservation activities*, E. Kumari.

Lien, Lief, and Johan Nydal. FUGLEFAUNAEN I OVRE HEIMDALEN, OYSTRE SLIDRE OG VAGA 1968-1972. [THE AVIFAUNA OF OVRE HEIMDALEN, OYSTRE SLIDRE AND VAGA, 1968-1972.] *Fauna* (Oslo) 26(1): 31-37, illus. 1973. [From Biol. Abstr. 56(9), 1973. In Norwegian with English summ.] *WR 151: 52*
[Zool. Mus., Oslo, Norway.]

Mocci DeMartis, Attilio. AVIFAUNE DU CAMPIDANO D'ORISTANO (SARDAIGNE). [THE BIRD FAUNA OF CAPIDANO D'ORISTANO (SARDINIA).] *Alauda* 41(1/2): 35-62, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 52*
[Via De Castro 37, Oristano, Italy.]

Olrogg, C. C. ADICIONES A LA AVIFAUNA ARGENTINA: I SUPLEMENTO DE "LA LISTA Y DISTRIBUCION DE LAS AVES ARGENTINAS", OPERA LILLOANA, IX, 1963. [ADDITIONS TO THE ARGENTINE BIRD FAUNA (I SUPPLEMENT TO "THE LIST AND DISTRIBUTION OF THE ARGENTINE BIRDS", OPERA LILLOANA, IX, 1963.] *Acta Zool. Lilloana* 26(17): 255-266. 1972. [From Biol. Abstr. 56(8), 1973. In Spanish with English summ.] *WR 151: 52*
[Inst. Miguel Lillo, San Miguel de Tucuman, Argentina.]

Pielowski, Zygmunt, and Aleksander Wasilewski. THE REGULATION OF NUMBERS AND CERTAIN ASPECTS OF THE POPULATION STRUCTURE IN COMMUNITIES OF FOREST BIRDS. *Ekol. Pol.* 20(21): 219-252, illus. 1972. [From Biol. Abstr. 56(9), 1973. In English with Polish summ.] *WR 151: 53*
[Stacja Badaw. Pol. Zwiazku Lowieckiego, Czempin, pow. Koscian, Poland.]

Priolo, Angelo. BREVI NOTE ORNITOLOGICHE DALLA SICILIA ORIENTALE. [SHORT ORNITHOLOGICAL NOTES FROM EASTERN SICILY.] *Riv. Ital. Ornitol.* 42(4): 430-434, illus. 1972. [From Biol. Abstr. 56(9), 1973. In Italian.] *WR 151: 53*

Ralph, Carol Pearson, and Stephen J. Chaplin. SOME BIRDS OF ISLA PUNTA ARENAS, PACIFIC COAST, COLOMBIA. *Condor* 75(3): 357-359. Autumn 1973. *WR 151: 53*
[Cornell Univ., Ithaca, N.Y.] With observations on numbers seen and habitat used by about sixty species.--Courtesy/ Paul A. Stewart.

Ricklefs, Robert E. DOMINANCE AND THE NICHE IN BIRD COMMUNITIES. *Am. Nat.* 106(950): 538-545. July-Aug. 1972. *WR 151: 53*
[Univ. Pa., Philadelphia.]

Schlicht, Dennis. HISTORICAL NOTES ON THE BIRDS OF BLACK HAWK COUNTY, IOWA. *Iowa Bird Life* 43(4): 87-96. Dec. 1973. *WR 151: 53*
[Box 154, Bucklin, Mo.]

Thibault, Jean-Claude. NOTES ORNITHOLOGIQUES POLYNESIENNES: I. LES ILES GAMBIERS. [POLYNESIAN ORNITHOLOGICAL NOTES: I. THE GAMBIER ISLANDS (FRENCH POLYNESIA).] *Alauda* 41(1/2): 111-119, illus. 1973. [From Biol. Abstr. 56(9), 1973. In French.] *WR 151: 53*
[17 rue de Tournon, Paris, France.]

Thiollay, J. M. ECOLOGIE DE MIGRATEURS TROPICAUX DANS UNE ZONE PREFORESTIERE DE COTE D'IVOIRE. [ECOLOGY OF TROPICAL MIGRANTS IN A SAVANNAH-PREFOREST ZONE OF IVORY COAST.] *Terre Vie* 1973(2): 268-296, 3 figs. Apr.-June 1973. In French with English summ. *WR 151: 53*
[Lab. Zool. Ecole Normale Superieure, 46 rue d'Ulm, Paris, France.]

Vernon, J. D. R. OBSERVATIONS SUR QUELQUES OISEAUX NICHEURS DU MAROC. [OBSERVATIONS ON SEVERAL NESTING BIRDS OF MOROCCO.] *Alauda* 41(1/2): 101-109. 1973. [From Biol. Abstr. 56(9), 1973. In French with English summ.] *WR 151: 53*
[55 Wolfridge Ride, Alveston, Bristol, England.] Notes on 65 spp.

Vuilleumier, Francois. BIRD SPECIES DIVERSITY IN PATAGONIA (TEMPERATE SOUTH AMERICA). *Am. Nat.* 106(948): 266-271. Mar.-Apr. 1972. *WR 151: 53*
[Univ. Lausanne, Lausanne, Switzerland.]

Winterbottom, J. BIRDS OF THE MALTAHOHE DISTRICT, SOUTH-WEST AFRICA. *Ostrich* 43(4): 217-227, illus. 1972. [From Biol. Abstr. 56(5), 1973.] *WR 151: 53*
[9 Alexandra Ave., Oranjezicht, South Africa.]

BIRDS--POPULATIONS & FLUCTUATIONS

Balat, Frantisek, and Ivana Touskova. ZUR ERKENNTNIS DER BIOMASSE-PRODUKTION DER NACHKOMMENSCHAFT DES FELDSPERLINGS, *PASSER MONTANUS* L. [THE PRODUCTION OF PROGENY BIOMASS OF THE TREE SPARROW, *PASSER MONTANUS* L.] *Zool. Listy* 21(4): 325-335, illus. 1972. [From Biol. Abstr. 56(6), 1973. In German with English summ.] *WR 151: 53*
[Inst. Vertebr. Zool., Czech. Acad. Sci. Kvetna 8, Brno, Czechoslovakia.]

Fey, D., and T. Lebret. VERANDERINGEN IN DE AVIFAUNA VAN DE BIESBOSCH IN HET EERSTE JAAR NA DE UITBANNING VAN HET GETIJ. [CHANGES IN THE AVIFAUNA OF THE BIESBOSCH IN THE FIRST YEAR AFTER THE ELIMINATION OF THE TIDE.] *Limosa* 45(3/4): 101-118, illus. 1972. [From Biol. Abstr. 56(6), 1973. In Dutch with English summ.] *WR 151: 54*
[Populierenlaan 7, Middelburg, Netherlands.]

Parker, Martin. INFLUX OF PINE GROSBEAKS INTO SOUTHERN ONTARIO AND ADJACENT NEW YORK STATE, DECEMBER 1971. *Am. Birds* 27(5): 839, 1 fig. Oct. 1973. *WR 151: 54*
[1494 Westbrook Dr., Peterborough, Ontario, Canada.] *"Pinicola enucleator."*

Ricklefs, Robert E., and George W. Cox. TAXON CYCLES IN THE WEST INDIAN AVIFAUNA. *Am. Nat.* 106(948): 195-219, 9 figs. Mar.-Apr. 1972. *WR 151: 54*
[Univ. Pa., Philadelphia.] "Here, we examine patterns of expansion and restriction in taxa of land birds, exclusive of raptors, within the West Indies."

Terborgh, John, and John Faaborg. TURNOVER AND ECOLOGICAL RELEASE IN THE AVIFAUNA OF MONA ISLAND, PUERTO RICO. *Auk* 90(4): 759-779, 3 figs. Oct. 1973. *WR 151: 54*
[Princeton Univ., Princeton, N.J.] During the period from 1892 to the present, there were three extinctions, three natural colonizations, and three introductions on Mona Island. Netted samples of birds captured in matched habitats on Mona Island and in the Guanica Forest Reserve in southwestern Puerto Rico are compared.--Courtesy/ Paul A. Stewart.

Zimmerman, Dale A. RANGE EXPANSION OF ANNA'S HUMMINGBIRD. *Am. Birds* 27(5): 827-835. Oct. 1973. *WR 151: 54*
[1011 Florence St., Silver City, N. Mex.] *"Calypte anna."*

BIRDS--ECONOMICS, CONTROL, MORTALITY

Guillory, Harland D. CAUSES OF MORTALITY FOR THE BARN SWALLOW IN SOUTHWESTERN LOUISIANA DURING THE BREEDING SEASON. *Inland Bird Banding News* 45(6): 221-223. Nov.-Dec. 1973. *WR 151: 54*
[Univ. Southwestern La., Lafayette.]

Junor, F. J. R. ESTIMATION OF THE DAILY FOOD INTAKE OF PISCIVOROUS BIRDS. *Ostrich* 43(4): 193-205, illus. 1972. [From Biol. Abstr. 56(5), 1973.] *WR 151: 54*
[Lake Kariba Fish. Res. Inst., P.O. Box 75, Kariba, Rhodesia.]

Kroll, James C., Keith A. Arnold, and Robert F. Gotie. AN OBSERVATION OF PREDATION BY NATIVE FIRE ANTS ON NESTLING BARN SWALLOWS. *Wilson Bull.* 85(4): 478-479. Dec. 1973. *WR 151: 54*
[Stephen F. Austin State Univ., Nacogdoches, Tex.] *"Hirundo rustica."*--Courtesy/ Paul A. Stewart.

Noble, Daniel L., and Wayne D. Shepperd. GREY-HEADED JUNCOS--IMPORTANT IN FIRST SEASON MORTALITY OF ENGELMANN SPRUCE. *J. For.* 71(12): 763-765, 2 figs. Dec. 1973. *WR 151: 54*
[Rocky Mountain Forest & Range Exp. Stn., Fort Collins, Colo.] Abstract: Gray-headed juncos clip attached seedcoats from newly germinated Engelmann spruce seedlings. In a five-year study, these birds clipped 20 percent of the seedlings and were the second leading cause of first-season mortality in clearcut openings.

Rumsey, Robert Louis. WOODPECKER DAMAGE TO WOODEN UTILITY POLES. *Ph.D. thesis, La. State Univ.* 154 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34 (6), 1973.] *WR 151: 54*
Woodpecker damage to wooden poles occurs in most of the southwestern, southern, southeastern, and northeastern states; the pileated *(Dryocopos*

pileatus), red-headed *(Melanerpes erythrocephalus)*, ladder-backed *(Dendrocopos scalaris)*, and golden-fronted woodpeckers *(Centurus aurifrons)* are the species most commonly causing damage.

Stewart, Paul A. ELECTROCUTION OF BIRDS BY AN ELECTRIC FENCE. *Wilson Bull.* 85(4): 476-477, 1 fig. Dec. 1973. *WR 151: 55*
[203 Mooreland Dr., Oxford, N.C.] As many as two hundred birds were reported killed on one farm in a year.

Taylor, Walter Kingsley. BLACK-THROATED BLUE AND CAPE MAY WARBLERS KILLED IN CENTRAL FLORIDA. *Bird-Banding* 44(4): 258-266. Autumn 1973. *WR 151: 55*
[Fla. Tech. Univ., Orlando.] *"Dendroica caerulescens* and *D. tigrina."*--Courtesy/ Paul A. Stewart.

BIRDS--PARASITES & DISEASES

Casto, Stanley D. A METHOD FOR COLLECTION OF THE QUILL MITE, *SYRINGOPHILOIDUS MINOR* (BERLESE) (PROSTIGMATA: SYRINGOPHILIDAE), FROM LIVING BIRDS. *J. Med. Entomol.* 10(5): 524, 1 fig. 8 Oct. 1973. *WR 151: 55*
[Tex. Tech Univ., Lubbock.]

Černá, Z. INTERESTING COCCIDIANS FROM WILD BIRDS. *J. Protozool.* 20(4): 535-536. Oct. 1973. Abstract only. *WR 151: 55*
[Charles Univ., Prague, Czechoslovakia.] *"Erithacus rubecula rubecula* and *Dendrocopus major pinetorum."*

Choudhury, A., and K. K. Misra. MULTIPLE INFECTIONS OF BLOOD PARASITES IN A MIGRATORY BIRD. *J. Protozool.* 20(4): 514. Oct. 1973. Abstract only. *WR 151: 55*
[Calcutta Univ., Calcutta, India.] *"Lanius schach collurio."*

Davies, Robert B., Walter T. Burkhard, and Charles P. Hibler. DIPLOSTOMOSIS IN NORTH PARK, COLORADO. *J. Wildl. Dis.* 9(4): 362-367, 4 figs. Oct. 1973. *WR 151: 55*
[Colo. State Univ., Fort Collins.] The life cycle of *Diplostomum spathaceum*, as it exists in North Park, Colorado, is elucidated. California gulls *(Larus californicus)*, common mergansers *(Mergus merganser)* and Forster's terns *(Sterna forsteri)* act as definitive hosts.--From abstr.

Hoogstrall, Harry, and Hilda Y. Wassef. THE *HAEMAPHYSALIS* TICKS (IXODOIDEA: IXODIDAE) OF BIRDS. 3. *H. (ORNITHOPHYSALIS)* SUBGEN. N.: DEFINITION, SPECIES, HOSTS, AND DISTRIBUTION IN THE ORIENTAL, PALEARCTIC, MALAGASY, AND ETHIOPIAN FAUNAL REGIONS. *J. Parasitol.* 59(6): 1099-1117, 53 figs. Dec. 1973. *WR 151: 55*
[U.S. Naval Med. Res. Unit no. 3 (NAMRU-3), c/o Spanish Embassy, Cairo, Egypt.]

Jabłońska, Joanna. *ANALGESOIDEA* MITES (ACARINA) FROM SYLVIID BIRDS OF THE GENUS *PHYLLOSCOPUS* BOIE., IN POLAND. *Acta Parasitol. Polonica* 20(32): 397-408. 1972. In English with Polish summ. *WR 151: 55*
[Dep. Parasitol., Polish Acad. Sci., Warsaw, Poland.]

Khalifa, Refaat. STUDIES ON SCHISTOSOMATIDAE LOOSS, 1899 (TREMATODA) OF AQUATIC BIRDS OF POLAND. I. ON THE LIFE CYCLE OF *BILHARZIELLA POLONICA* KOWALEWSKI, 1895, WITH A DISCUSSION OF THE SUBFAMILY BILHARZIELLINAE PRICE, 1929. *Acta Parasitol. Polonica* 20(27): 343-365, 3 figs., 3 pls. 1972. In English with Polish summ. *WR 151: 55*

Komorowski, Richard A., and George T. Hensley. EPIZOOTIC SALMONELLOSIS IN AN OPEN ZOO AVIARY. *Arch. Environ. Health* 27(2): 110-111. Aug. 1973. *WR 151: 55*
[Naval Hospital, Oakland, Calif.]

Lund, Everett E., and Anne M. Chute. RECIPROCAL TRANSFER OF *HETERAKIS GALLINARUM* LARVAE BETWEEN CHICKENS AND CHUKAR PARTRIDGES: EFFECTS ON *H. GALLINARUM, HISTOMONAS MELEAGRIDIS,* AND *PARAHISTOMONAS*. *Proc. Helminthol. Soc. Wash.* 40(1): 153-157. 1973. [From Biol. Abstr. 56(5), 1973.] *WR 151: 56*
[Agric. Res. Cent., Beltsville, Md.]

Mohanty, G. C., L. N. Acharjyo, and B. S. Rajya. EPIDEMIOLOGY OF MAREK'S DISEASE (MD): STUDIES ON THE INCIDENCE OF MD PRECIPITINS IN SOME ZOO BIRDS. *Poultry Sci.* 52(3): 963-966. May 1973. *WR 151: 56*
[Indian Veterinary Res. Inst., Izatnagar, India.]

Nass, Werner. BEITRAG ZUM PROBLEM AVIAERER SALMONELLOSEN. [CONTRIBUTION TO THE PROBLEM OF AVIAN SALMONELLOSIS.] *Wiss. Z. Martin Luther Univ. Halle Wittenberg Math. Naturwiss. Reihe* 21(5): 7-12. 1972. [From Biol. Abstr. 56 (8), 1973. In German.] *WR 151: 56*
[Univ. Halle-Wittenberg, Halle, Germany.] *Salmonella typhimurium* was found in excrement from *Larus ridibundus* in the premises of the Halle (East Germany) city municipal sewage treatment plant. Other colonies of *L. ridibundus* and *Corvus frugilegus* were negative.

Pence, Danny B. THE NASAL MITES OF BIRDS FROM LOUISIANA. VIII. ADDITIONAL RECORDS AND DESCRIPTION OF A NEW SPECIES (ACARINA: DERMANYSSIDAE, EREYNETIDAE, EPIDERMOPTIDAE, AND CYTODITIDAE). *J. Parasitol.* 59(5): 874-880, 6 figs. Oct. 1973. *WR 151: 56*
[Tex. Tech Univ., Lubbock.]

Pence, Danny B. THE NASAL MITES OF BIRDS FROM LOUISIANA. IX. SYNOPSIS. *J. Parasitol.* 59(5): 881-892. Oct. 1973. *WR 151: 56*
[Tex. Tech Univ., Lubbock.] A synopsis of a survey of the nasal mites found in 1900 specimens of 193 spp. of birds.

Shakhmatov, G. N., A. U. Kuima, and G. A. Balasanova. [ADDITION TO THE FAUNA OF BIRD BLOOD PARASITES IN TADZHIKISTAN.] *Dokl. Akad. Nauk Tadzh. SSR* 15(12): 56-58, illus. 1972. [From Biol. Abstr. 56(9), 1973. In Russian with Tadzhikistani summ.] *WR 151: 56*
[E. N. Pavlovskii Inst. Zool. Parasitol., Acad. Sci. Tadzh. SSR, Dushanbe, USSR.]

Slemons, Richard D., Ralph S. Cooper, and John S. Orsborn. ISOLATION OF TYPE-A INFLUENZA VIRUSES FROM IMPORTED EXOTIC BIRDS. *Avian Dis.* 17(4): 746-751, 1 fig. Oct.-Dec. 1973. *WR 151: 56*
[Armed Forces Inst. Pathol., Washington, D.C.] Fifteen type-A influenza viruses were identified from 15 cases involving 12 different species of exotic birds being imported into southern California from outside the United States and some that had already been distributed to several locations there.--From abstr.

Smith, H. Eddie. A RHINONYSSID MITE IN ATYPICAL LOCI OF ESTRILDINE FINCHES IN HAWAII. *J. Parasitol.* 59(6): 1148. Dec. 1973. *WR 151: 56*
[Univ. Hawaii, Honolulu.]

Sonenshine, Daniel E., and Carleton M. Clifford. CONTRASTING INCIDENCE OF ROCKY MOUNTAIN SPOTTED FEVER IN TICKS INFESTING WILD BIRDS IN EASTERN U.S. PIEDMONT AND COASTAL AREAS, WITH NOTES ON THE ECOLOGY OF THESE TICKS. *J. Med. Entomol.* 10(5): 497-502. 8 Oct. 1973. *WR 151: 56*
[Old Dominion Univ., Norfolk, Va.] Thrushes (Turdidae), sparrows (Fringillidae), warblers (Parulidae) and mockingbirds (Mimidae) were the most important tick hosts in the coastal localities, where the mean tick burden was 0.86 ticks/bird. Sparrows, warblers, wrens (Troglodytidae), tanagers (Thraupidae) and the bobwhite quail (Phasianidae) were the tick hosts in the Piedmont localities, where the mean tick burden was 0.67 ticks/bird.--From abstr.

GAME BIRDS--GENERAL

Balasch, J., L. Palacios, S. Musquera, J. Palomeque, M. Jiménez, and M. Alemany. COMPARATIVE HAEMATOLOGICAL VALUES OF SEVERAL GALLIFORMES. *Poultry Sci.* 52(4): 1531-1534, 1 fig. July 1973. *WR 151: 57*
[Univ. Barcelona, Barcelona, Spain.] Abstract: Hematological values of six species of galliformes have been determined. The values shown are homogeneous.

Doran, David J., and Patricia C. Augustine. COMPARATIVE DEVELOPMENT OF *EIMERIA TENELLA* FROM SPOROZOITES TO OOCYSTS IN PRIMARY KIDNEY CELL CULTURES FROM GALLINACEOUS BIRDS. *J. Protozool.* 20(5): 658-661, 6 figs. Nov. 1973. *WR 151: 57*
[Agric. Res. Serv., Beltsville, Md.] *Eimeria tenella* completed its endogenous life cycle in primary cultures of kidney cells from 2- to 3-week-old chickens, guinea fowl, partridges, pheasants, quail, and turkeys. Similarity in percentage of infection at 4 hr suggested that sporozoites entered cells from all birds in equal numbers.--From abstr.

Vetterling, J. M. *EIMERIA TENELLA*: HOST SPECIFICITY STUDIES IN EIGHT SPECIES OF GALLINACEOUS BIRDS. *J. Protozool.* 20(4): 510. Oct. 1973. Abstract only. *WR 151: 57*
[Agric. Res. Serv., Beltsville, Md.]

QUAIL

Bacon, Wayne L., Karl E. Nestor, and Philip A. Renner. OVARIAN FOLLICULAR DEVELOPMENT IN EGG AND GROWTH LINES OF JAPANESE QUAIL. *Poultry Sci.* 52(3): 1195-1199. May 1973. *WR 151: 57*
[Ohio Agric. Res. & Development Cent., Wooster.]

Bernstein, Marvin H. DEVELOPMENT OF THERMOREGULATION IN PAINTED QUAIL, *EXCALFACTORIA CHINENSIS*. *Comp. Biochem. Physiol. A Comp. Physiol.* 44(2): 355-366, illus. 1973. [From Biol. Abstr. 56(6), 1973.] *WR 151: 57*
[Duke Univ., Durham, N.C.]

Borchelt, P., and R. K. Ringer. TEMPERATURE REGULATION DEVELOPMENT IN BOBWHITE QUAIL *(COLINUS VIRGINIANUS)*. *Poultry Sci.* 52(2): 793-798, 5 figs. Mar. 1973. *WR 151: 57*
[Mich. State Univ., East Lansing.]

Borchett, J. Eyer, and D. McHenry. DUSTBATHING IN BOBWHITE QUAIL *(COLINUS VIRGINIANUS)*. *Behav. Biol.* 8(1): 109-114. 1973. [From Bird-Banding 44(3), 1973.] *WR 151: 57*

Davis, Charles A., and Roger L. Banks. SOME FOOD HABITS OF SCALED QUAIL IN SOUTHEASTERN NEW MEXICO. *N. Mex. State Univ. Agric. Exp. Stn. Res. Rep.* 270. 1 + 5 p. Nov. 1973. *WR 151: 57*
[N. Mex. State Univ., Las Cruces.] Despite the diversity of foods eaten, the bulk of the *Callipepla squamata* diet was provided by a few staples, especially seeds of mesquite *(Prosopis juliflora)*, amaranth *(Amaranthus* sp.*)*, euphorbia *(Euphorbia* spp.*)*, doveweed or croton *(Croton* sp.*)*, and snakeweed *(Gutierrezia sarothrae)*, along with beetles *(Coleoptera)* and grasshoppers *(Orthoptera)*.

Dodson, D. L., and T. H. Coleman. AROSTROPEROCEPHALY: A LETHAL CONDITION IN JAPANESE QUAIL. *Poultry Sci.* 52(4): 1654-1657, 1 fig. July 1973. *WR 151: 57*
[Mich. State Univ., East Lansing.]

Dutton, R. L., S. G. Kenzy, and W. A. Becker. MAREK'S DISEASE IN THE JAPANESE QUAIL *(COTURNIX COTURNIX JAPONICA)*. *Poultry Sci.* 52(1): 139-143, 2 figs. Jan. 1973. *WR 151: 57*
[DeKalb AgResearch, Inc., DeKalb, Ill.]

Grieve, B. J., Ruth Wachob, Alan Peltz, and A. van Tienhoven. SYNCHRONOUS HATCHING OF JAPANESE QUAIL AND MATURITY OF THE CHICKS HATCHED PREMATURELY. *Poultry Sci.* 52(4): 1445-1450. July 1973. *WR 151: 58*
[Clemson Univ., Clemson, S.C.]

Gromme, Owen J. IN MEMORIAM: HERBERT LEE STODDARD. *Auk* 90(4): 870-876, 1 pl. Oct. 1973. *WR 151: 58*
[R.3, Portage, Wis.] A tribute to the late outstanding authority on the bobwhite.--Courtesy/ Paul A. Stewart.

Healy, William M., and Jack Ward Thomas. EFFECTS OF DUSTING ON PLUMAGE OF JAPANESE QUAIL. *Wilson Bull.* 85(4): 442-448, 2 figs. Dec. 1973. *WR 151: 58*
[N.E. Forest Exp. Stn., 180 Canfield St., Morgantown, W. Va.] The most noticeable effect of dusting by *Coturnix c. japonica* was drying and fluffing of the down.--Courtesy/ Paul A. Stewart.

Klimstra, W. D., and T. G. Scott. ADAPTATION OF PEN-REARED BOBWHITES TO FOODS IN A NATURAL ENVIRONMENT. *J. Wildl. Manage.* 37(4): 492-494. Oct. 1973. *WR 151: 58*
[Southern Ill. Univ., Carbondale.] *"Colinus virginianus."*

MacLaury, D. W., W. M. Insko, Jr., J. J. Begin, and T. H. Johnson. SHAPE INDEX *VERSUS* HATCHABILITY OF FERTILE EGGS OF JAPANESE QUAIL *(COTURNIX COTURNIX JAPONICA)*. *Poultry Sci.* 52(2): 558-562, 1 fig. Mar. 1973. *WR 151: 58*
[Ky. Agric. Exp. Stn., Lexington.]

Manly, B. F. J., P. Miller, and L. M. Cook. ANALYSIS OF A SELECTIVE PREDATION EXPERIMENT. *Am. Nat.* 106(952): 719-736, 2 figs. Nov.-Dec. 1972. *WR 151: 58*
[Univ. Papua & New Guinea, P.O. Box 1144, Boroko, Papua, New Guinea.] "The experiment to be described is one of a series designed to investigate the response of birds to a choice of colored foods under different conditions of frequency, density, and number of morphs. The predators are Japanese quail, *Coturnix coturnix japonica* Temminck and Schlegel, and the 'prey' consists of colored pastry pellets. Results illustrate a new method of analysis that appears suitable for comparative studies of predator behavior."

Marks, H. L., and Till M. Huston. RESPONSE OF SELECTED QUAIL LINES TO HEAT STRESS. *Poultry Sci.* 52(4): 1668-1670. July 1973. *WR 151: 58*
[USDA, Athens, Ga.]

Rea, Amadeo M. THE SCALED QUAIL *(CALLIPEPLA SQUAMATA)* OF THE SOUTHWEST: SYSTEMATIC AND HISTORICAL CONSIDERATION. *Condor* 75(3): 322-329, 1 fig. Autumn 1973. *WR 151: 58*
[Univ. Ariz., Tucson.] Courtesy/ Paul A. Stewart.

Renzoni, Aristeo. THE INFLUENCE OF SOME TOXICANTS ON THE REPRODUCTIVE ACTIVITIES OF THE JAPANESE QUAIL *(COTURNIX COTURNIX JAPONICA)*. *Biol. Conserv.* 5 (3): 181-184, 2 figs. July 1973. *WR 151: 58*
[Univ. Siena, Siena, Italy.]

Sawhney, D. S., D. V. Vadehra, and R. C. Baker. AFLATOXICOSIS IN THE LAYING JAPANESE QUAIL *(COTURNIX COTURNIX JAPONICA)*. *Poultry Sci.* 52(2): 465-473, 7 figs. Mar. 1973. *WR 151: 58*
[Cornell Univ., Ithaca, N.Y.]

Sefton, A. E., and P. B. Siegel. MATING BEHAVIOR OF JAPANESE QUAIL. *Poultry Sci.* 52(3): 1001-1007, 1 fig. May 1973. *WR 151: 58*
[Nova Scotia Agric. Coll., Truto, Nova Scotia, Canada.]

Tobler, Steven Lee. FOOD PLOTS IN RELATION TO FOOD AVAILABILITY FOR BOBWHITE QUAIL. *M.S. thesis, Okla. State Univ.* vii + 71 p. Dec. 1973. *WR 151: 58*
"Colinus virginianus."--Courtesy/ James C. Lewis.

Wilson, H. R., M. W. Holland, Jr., and R. L. Renner, Jr. EGG-LAYING CYCLE CHARACTERISTICS OF THE BOBWHITE *(COLINUS VIRGINIANUS)*. *Poultry Sci.* 52(4): 1571-1573, 3 figs. July 1973. *WR 151: 59*
[Fla. Agric. Exp. Stn., Gainesville.]

Yamada, Masahiro. BIOCHEMICAL STUDIES ON THE SHELL GLAND OF JAPANESE QUAIL, *COTURNIX COTURNIX JAPONICA*. 1. EFFECT OF A DEVELOPING EGG LOCATION ON ACTIVITY OF GLYCOLYTIC AND OTHER ENZYMES IN THE SHELL GLAND. *Poultry Sci.* 52(4): 1375-1382, 5 figs. July 1973. *WR 151: 59*
[Kyushu Univ., Fukuoka City, Japan.]

PHEASANTS

Baxter, William L., and Carl W. Wolfe. THE RING-NECKED PHEASANTS IN NEBRASKA. *Nebraskaland* 51(10): 18-51, illus. Oct. 1973. *WR 151: 59*
The history, range, population (distribution, density and trend), reproduction, hunting and management of Nebraska ring-necked pheasants are discussed.

Bejsovec, J. THE HELMINTHS OF THE CHICKEN AND THE PHEASANT ON SITES OF THEIR MUTUAL CONTACT. *Helminthologia* (Bratislava) 11: 155-160, illus. 1970 (1972). [From Biol. Abstr. 56(6), 1973. In English with Russian and German summ.] *WR 151: 59*

Deethardt, Dorothy, and Frances M. Hettler. ACCEPTABILITY OF FREEZE-DRIED PHEASANT MEAT. *Poultry Sci.* 52(5): 1913-1917. July 1973. *WR 151: 59*
[S. Dak. Agric. Exp. Stn., Brookings.]

Dumke, Robert T., and Charles M. Pils. MORTALITY OF RADIO-TAGGED PHEASANTS ON THE WATERLOO WILDLIFE AREA. *Wis. Dep. Nat. Resour. Tech. Bull.* no. 72. 52 p., illus. 1973. *WR 151: 59*
Hen pheasant mortality is analyzed for the period 1968-1971.

Farris, Allen L. THE RING-NECKED PHEASANT IN IOWA--1972. *Iowa Wildl. Res. Bull.* no. 7. iv + 38 p., 4 figs. Oct. 1973. *WR 151: 59*
Abstract: Survey data relating to Iowa's pheasant population for 1972 are presented. Winter sex ratio data obtained from January through mid-March varied from a low of 2.4 hens per cock in the northwest region to a high of 7.2 hens per cock in the eastern region. Statewide the post-hunting season ratio was 1 cock per 3.5 hens indicating a 71 percent cock harvest in 1971. There was a statewide mean of 12.2 calls per stop on the spring crowing cock counts. The spring roadside census showed 0.65 cocks and 1.19 hens per mile, statewide. This was essentially no change from 1971. Numbers of pheasants observed on the August roadside count were highest in the southwest region and lowest in the southern region. Statewide the fall populations were down about 6 percent from 1971. The estimated pheasant kill in 1972 was 1,593,300 cocks.

Hanson, Lynn E., and Donald R. Progulske. MOVEMENTS AND COVER PREFERENCES OF PHEASANTS IN SOUTH DAKOTA. *J. Wildl. Manage.* 37(4): 454-461, 3 figs. Oct. 1973. *WR 151: 59*
[S. Dak. State Univ., Brookings.] *"Phasianus colchicus."*

Hart, Dennis. DOES THE PHEASANT HAVE A FUTURE IN VIRGINIA? *Va. Wildl.* 34 (10): 14-15, illus. Oct. 1973. *WR 151: 59*
"The future of pheasants and pheasant hunting in Virginia clearly appears to be a matter involving not only the Game Commission but also, and equally as much, sportsmen, farmers, game breeders, shooting preserve operators, and an intensifying public interest in, and concern for, the wildlife resources of the state."

TURKEY

Kopischke, Earl D., and Roger N. Johnson. CURRENT STATUS OF WILD TURKEYS IN SOUTHEASTERN MINNESOTA. *Loon* 45(2): 49-50. Summer 1973. *WR 151: 60*

GROUSE, PARTRIDGE, ETC.

Archibald, Herbert Lyle. SPRING DRUMMING ACTIVITY AND SPACE USE OF RUFFED GROUSE. *Ph.D. thesis, Univ. Minn.* 181 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 60*
"Bonasa umbellus."

Backus, David. THE BIRD BUILT FOR QUALITY HUNTING. *Wis. Conserv. Bull.* 38 (5): 3-5, illus. Sept.-Oct. 1973. *WR 151: 60*
"Bonasa umbellus."

Braun, Clait E., and Ronald G. Blumberg. AN ALBINISTIC BLUE GROUSE FROM COLORADO. *Condor* 75(3): 345-346, 1 fig. Autumn 1973. *WR 151: 60*
[Colo. Div. Game, Fish & Parks, Wildl. Res. Cent., Fort Collins.] *"Dendragapus obscurus."*--Courtesy/ Paul A. Stewart.

Brown, Robert J. PRECOCIOUS LEK BEHAVIOR IN SHARP-TAILED GROUSE CHICKS. *Wilson Bull.* 85(4): 472-473. Dec. 1973. *WR 151: 60*
[Box 9, St. Norbert, Manitoba, Canada.] Lek behavior was observed in four-day-old sharp-tailed grouse *(Pedioecetes phasianellus)* chicks.--Courtesy/ Paul A. Stewart.

Crawford, John A., and Eric G. Bolen. SPRING USE OF STOCK PONDS BY LESSER PRAIRIE CHICKENS. *Wilson Bull.* 85(4): 471-472. Dec. 1973. *WR 151: 60*
[Tex. Tech Univ., Lubbock.] The availability of water in stock watering ponds may enhance the survival of lesser prairie chickens *(Tympanuchus pallidicinctus)* during periods of drought.--Courtesy/ Paul A. Stewart.

Doerr, Phillip David. RUFFED GROUSE ECOLOGY IN CENTRAL ALBERTA--DEMOGRAPHY, WINTER FEEDING ACTIVITIES, AND THE IMPACT OF FIRE. *Ph.D. thesis, Univ. Wis.* 127 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(6), 1973.] *WR 151: 60*
"Bonasa umbellus."

Ellison, Laurence N. SEASONAL SOCIAL ORGANIZATION AND MOVEMENTS OF SPRUCE GROUSE. *Condor* 75(4): 375-385. Winter 1973. *WR 151: 60*
[Univ. Alaska, Fairbanks.] Seasonal flock size, sex and age composition of flocks, seasonal frequency of display by males, spring and summer movements of hens, spring and summer movements of males, fall movements, and winter movements of *Canachites canadensis* are discussed.--Courtesy/ Paul A. Stewart.

Gates, John M. GRAY PARTRIDGE ECOLOGY IN SOUTHEAST-CENTRAL WISCONSIN. *Wis. Dep. Nat. Resour. Tech. Bull.* no. 70. 9 p., illus. 1973. *WR 151: 60*
Research methods, generalized habitat selection, reproduction and population dynamics for *Perdix perdix* studies conducted during 1959-1966.

Kirsch, Leo M., Albert T. Klett, and Harvey W. Miller. LAND USE AND PRAIRIE GROUSE POPULATION RELATIONSHIPS IN NORTH DAKOTA. *J. Wildl. Manage.* 37(4): 449-453, 1 fig. Oct. 1973. *WR 151: 60*
[Northern Prairie Wildl. Res. Cent., Woodworth, N. Dak.] *"Tympanuchus cupido* and *Pedioecetes phasianellus."*

Moss, Robert. THE DIGESTION AND INTAKE OF WINTER FOODS BY WILD PTARMIGAN IN ALASKA. *Condor* 75(3): 293-300. Autumn 1973. *WR 151: 60*
[Nature Conservancy, Blackhall, Banchory, Kincardineshire AB3 3PS, Scotland.] A method of measuring the digestibility, metabolizable energy, and daily intake of food by wild ptarmigan in winter, using the magnesium which occurs naturally in the food as a digestibility marker is described.--Courtesy/ Paul A. Stewart.

GROUSE, PARTRIDGE, ETC.--Continued

Redfield, J. A. VARIATIONS IN WEIGHT OF BLUE GROUSE *(DENDRAGAPUS OBSCURUS)*. *Condor* 75(3): 312-321, 6 figs. Autumn 1973. *WR 151: 61*
[Univ. British Columbia, Vancouver, British Columbia, Canada.] Weight variations in relation to sex, age, season, and years are discussed.--Courtesy/ Paul A. Stewart.

Wiley, R. Haven. THE STRUT DISPLAY OF MALE SAGE GROUSE: A "FIXED" ACTION PATTERN. *Behaviour* 47(1-2): 129-152, 6 figs. 1973. In English with German summ. *WR 151: 61*
[Univ. N.C., Chapel Hill.] *"Centrocercus urophasianus."*

Woodard, A. E., H. Abplanalp, and R. L. Snyder. OVIPOSITION TIME IN THE CHUKAR PARTRIDGE. *Poultry Sci.* 52(2): 536-539, 1 fig. Mar. 1973. *WR 151: 61*
[Univ. Calif., Davis.]

DOVES & PIGEONS

Bettmann, H. DIE RINGELTAUBEN IM WINTER 1971/72. [RINGDOVES IN THE WINTER 1971/72.] *Z. Jagdwiss.* 18(3): 168-172. 1972. [From Biol. Abstr. 56(6), 1973. In German.] *WR 151: 61*
"Columba palumbus."

Davis, Charles A., and Michael W. Anderson. SEASONAL FOOD USE BY MOURNING DOVES IN THE MESILLA VALLEY, SOUTH-CENTRAL NEW MEXICO. *N. Mex. State Univ. Agric. Exp. Stn. Bull.* 612. 21 p. Oct. 1973. *WR 151: 61*
[N. Mex. State Univ., Las Cruces.] *"Zenaida macroura."*

Davis, Charles A., and Gerald K. Sintz. NESTING OF MOURNING DOVES AT SAN SIMON CIENEGA, SOUTHWESTERN NEW MEXICO. *N. Mex. State Univ. Agric. Exp. Stn. Res. Rep.* 265. i + 8 p., 3 figs. Nov. 1973. *WR 151: 61*
[N. Mex. State Univ., Las Cruces.]

Erickson, Carl J. MATE FAMILIARITY AND THE REPRODUCTIVE BEHAVIOR OF RINGED TURTLE DOVES. *Auk* 90(4): 780-795, 9 figs. Oct. 1973. *WR 151: 61*
[Duke Univ., Durham, N.C.] *"Streptopelia risoria."* As association with a mate progressed, aggressive behavior became more intense and was directed almost exclusively to animals other than the mate. In contrast, nest soliciting displays, nest material handling, and allopreening were increasingly and preferentially performed with the mate.--From summ. Courtesy/ Paul A. Stewart.

Gutiérrez, Ralph J. HEMATOZOA FROM NEW MEXICO MOURNING DOVES. *J. Parasitol.* 59(5): 932-933. Oct. 1973. *WR 151: 61*
[Univ. Calif., Berkeley.]

Mathiasson, Sven. SAMBANDET MELLAN MAGSTENSMANGD OCH FODOTYP HOS RINGDUVA *(COLUMBA PALUMBUS)*. [THE RELATION BETWEEN THE NUMBER OF GRIT STONES AND THE TYPE OF FOOD OF WOOD PIGEONS *(COLUMBA PALUMBUS)*.] *Goteb. Naturhist. Mus. Arstryck* 1972: 13-22, illus. 1972. [From Biol. Abstr. 50(7), 1973. In Swedish with English summ.] *WR 151: 61*
[Naturhist. Mus., Goteborg, Sweden.]

Walker, J., and R. Berger. SLEEP IN THE DOMESTIC PIGEON *(COLUMBA LIVIA)*. *Behav. Biol.* 7(2): 195-203. 1972. [From Bird-Banding 44(3), 1973.] *WR 151: 61*

Weeden, Robert B., and Loyal Johnson. NEW RECORDS OF MOURNING DOVES IN SOUTHCENTRAL AND INTERIOR ALASKA. *Condor* 75(3): 353. Autumn 1973. *WR 151: 61*
[Univ. Alaska, Fairbanks.] *"Zenaida macroura."*--Courtesy/ Paul A. Stewart.

WATERFOWL

Bouc, Ken. THE ART OF DECOYING. *Nebraskaland* 51(10): 12-15, 53-54, 58. Oct. 1973. *WR 151: 62*
"Gives waterfowlers benefit of more than a century's duck hunting experience."

Cain, Brian W. EFFECT OF TEMPERATURE ON ENERGY REQUIREMENTS AND NORTHWARD DISTRIBUTION OF THE BLACK-BELLIED TREE DUCK. *Wilson Bull.* 85(3): 308-317, 3 figs. Sept. 1973. *WR 151: 62*
[Texas A&M Univ., College Station.] Gross energy intake, excretory energy, and existence metabolism increased linearly with decreasing temperature. Black-bellied tree ducks could not tolerate -20°C in a caged condition beyond three days, their legs freezing and death following within 24 hours.--Courtesy/ Paul A. Stewart.

Dunford, Robert D., and Ray B. Owen, Jr. SUMMER BEHAVIOR OF IMMATURE RADIO-EQUIPPED WOODCOCK IN CENTRAL MAINE. *J. Wildl. Manage.* 37(4): 462-469, 3 figs. Oct. 1973. *WR 151: 62*
[Fla. Game & Fresh Water Fish Comm., Tallahassee.] *"Philohela minor."*

Dunker, H., and K. Elgmork. NESTING OF THE BLACK-THROATED DIVER, *GAVIA ARCTICA* (L.) IN SMALL BODIES OF WATER. *Norw. J. Zool.* 21(1): 33-37, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 62*
[Univ. Oslo, Oslo, Norway.]

Gilmer, David S., Thomas J. Dwyer, and Scott R. Derrickson. SPACE AGE TECHNOLOGY AND LANDOWNER COOPERATION HELPS WATERFOWL STUDY / WATERFOWL INVESTIGATORS BUG DUCKS. *N. Dak. Outdoors* 36(4): 14-17, illus. Oct. 1973. *WR 151: 62*
[Northern Prairie Wildl. Res. Cent., Jamestown.] Popular account of telemetry studies.

Heusmann, H. W., and James E. Cardoza. RELOCATION OF A WOOD DUCK CLUTCH FROM A NATURAL CAVITY TO A NEST-BOX. *Wilson Bull.* 85(4): 467-468. Dec. 1973. *WR 151: 62*
[Mass. Div. Fish & Game, Westboro.] A clutch of wood duck *(Aix sponsa)* eggs was moved along with the incubating female when the eggs were in the process of hatching. Later capture of the web-tagged ducklings indicated that the transfer was successful.--Courtesy/ Paul A. Stewart.

Lokemoen, John T., and Harold F. Duebbert. AN UPLAND NEST OF THE REDHEAD FAR FROM WATER. *Wilson Bull.* 85(4): 468. Dec. 1973. *WR 151: 62*
[Northern Prairie Wildl. Res. Cent., Jamestown, N. Dak.] A redhead *(Aythya americana)* nest was located 872 feet from wetland.--Courtesy/ Paul A. Stewart.

McEwan, E. H., and A. F. C. Koelink. THE HEAT PRODUCTION OF OILED MALLARDS AND SCAUP. *Can. J. Zool.* 51(1): 27-31, illus. 1973. [From Biol. Abstr. 56(9), 1973. In English with French summ.] *WR 151: 62*
[Univ. British Columbia, Vancouver, British Columbia, Canada.]

McNicholl, Martin K. RECORDS OF THE HARLEQUIN DUCK IN MANITOBA AND ADJACENT REGIONS. *Blue Jay* 31(3): 150-152, 1 fig. Sept. 1973. *WR 151: 62*
[Univ. Alberta, Edmonton, Alberta, Canada.]

Miller, Steven William. THE COMMON MERGANSER: ITS WINTERING DISTRIBUTION AND PREDATION IN A WARM WATER RESERVOIR. *M.S. thesis, Okla. State Univ.* viii + 90 p., 21 figs. Dec. 1973. *WR 151: 62*
"Mergus merganser americanus."--Courtesy/ James C. Lewis.

Molodovskii, A. V. [REPRODUCTION OF *ANAS CLYPEATA* L. IN THE GORKI RESERVOIR.] *Vestn. Zool.* 6(3): 55-61. 1972. [From Biol. Abstr. 56(7), 1973. In Russian with English summ.] *WR 151: 62*
[Gorki State Univ., Gorki, USSR.]

Nieman, D. J., and H. J. Dirschl. WATERFOWL POPULATIONS ON THE PEACE-ATHABASCA DELTA, 1969 AND 1970. *Can. Wildl. Serv. Occas. Pap.* no. 17. 26 p., 18 figs. 1973. In English with French summ. *WR 151: 63*
Water levels are the prime factor in the distribution and habitat utilization of waterfowl in the Peace-Athabasca Delta. A progressive and cumulative water level decline has resulted in the deterioration and consequent reduced use of much waterfowl breeding, molting and fall staging habitat.--From abstr.

Raikow, Robert J. LOCOMOTOR MECHANISMS IN NORTH AMERICAN DUCKS. *Wilson Bull.* 85(3): 295-307, 3 figs. Sept. 1973. *WR 151: 63*
[Univ. Pittsburgh, Pittsburgh, Pa.] Wing size, wing shape, wing slotting, and paddle area of webs of feet of the surface feeding and diving ducks are compared.--Courtesy/ Paul A. Stewart.

Rasmussen, David O., and Douglas C. Keran. SPRING SEX RATIOS OF MIGRATORY WATERFOWL IN NORTH-CENTRAL MINNESOTA. *Loon* 45(2): 56-61, 3 figs. Summer 1973. *WR 151: 63*
[Brainerd Area Tech. Inst., Brainerd, Minn.]

Sen, A. R. RESPONSE ERRORS IN CANADIAN WATERFOWL SURVEYS. *J. Wildl. Manage.* 37(4): 485-491, 1 fig. Oct. 1973. *WR 151: 63*
[Canadian Wildl. Serv., Ottawa, Ontario, Canada.]

Smith, Kirtland G., and Harold H. Prince. THE FASTING METABOLISM OF SUBADULT MALLARDS ACCLIMATIZED TO LOW AMBIENT TEMPERATURES. *Condor* 75(3): 330-335, 2 figs. Autumn 1973. *WR 151: 63*
[Mich. State Univ., East Lansing.] The greater metabolic rate and body weight of the males suggests that they can tolerate lower temperature extremes than the females. The lower critical temperature was near 20°C for a fasted bird.--From summ. Courtesy/ Paul A. Stewart.

Starkey, E. E., and J. F. Starkey. DESCRIPTION OF AN AERIAL-PREDATOR ALARM CALL FOR MALLARD *(ANAS PLATYRHYNCHOS)* DUCKLINGS. *Condor* 75(3): 364-366, 3 figs. Autumn 1973. *WR 151: 63*
[Natl. Park Serv., 7200 W. Alameda Ave., Denver, Colo.] A distinct call was elicited by moving overhead objects.--Courtesy/ Paul A. Stewart.

Stott, Richard S., and David P. Olson. FOOD-HABITAT RELATIONSHIP OF SEA DUCKS ON THE NEW HAMPSHIRE COASTLINE. *Ecology* 54(5): 996-1007, 1 fig. Late Summer 1973. *WR 151: 63*
[Univ. N.H., Durham.] The physical structure of the substratum as reflected in food availability is a major determinant in the coastal distribution of waterfowl.--Courtesy/ Paul A. Stewart.

Sugden, Lawson G. FEEDING ECOLOGY OF PINTAIL, GADWALL, AMERICAN WIDGEON AND LESSER SCAUP DUCKLINGS IN SOUTHERN ALBERTA. *Can. Wildl. Serv. Rep. Ser.* no. 24. 45 p., 4 figs. 1973. Price $1.50. In English with French and Russian summ. *WR 151: 63*
[Canadian Wildl. Serv., Saskatoon, Saskatchewan, Canada.] This and previous studies have shown that a diverse habitat will meet the needs of the greatest variety of species and, hence, the largest number of ducks. Each species requires diversity of food to meet its changing requirements throughout the prefledgling period.--From summ.

Van Scharen, K., and C. Joiris. LES OISEAUX D'EAU DANS LA VALLEE DE LA DYLE (BRABANT), DE JUILLET 1964 A JUIN 1971. [THE AQUATIC BIRDS IN THE VALLEY OF THE DYLE (PROVINCE OF BRABANT, BELGIUM) FROM JULY 1964 TO JUNE 1971.] *Aves* 9(4/5): 141-186, illus. 1971. [From Biol. Abstr. 56(5), 1973. In French.] *WR 151: 63*
[Steenweg op Leuven, Tervuren, Belgium.]

Vermeer, Kees. SOME ASPECTS OF THE NESTING REQUIREMENTS OF COMMON LOONS IN ALBERTA. *Wilson Bull.* 85(4): 429-435, 1 fig. Dec. 1973. *WR 151: 64*
[Canadian Wildl. Serv., 515 Centennial Bldg., 10015 105 St., Edmonton, Alberta, Canada.] Breeding common loons *(Gavia immer)* were associated with lakes containing islands, and there was an inverse correlation between numbers of nesting loons and the amount of human activities at these lakes.--Courtesy/ Paul A. Stewart.

Vielliard, J. RECENSEMENT ET STATUT DES POPULATIONS D'ANATIDES DU BASSIN TCHADIEN. [INVENTORY AND STATUS OF THE POPULATIONS OF ANATIDAE OF THE CHAD BASIN.] *Cah. ORSTOM Ser. Hydrobiol.* 6(1): 85-100, illus. 1972. [From Biol. Abstr. 56(8), 1973. In French with English summ.] *WR 151: 64*
[Ecole Normal Superior, 46 rue d'Ulm, Paris, France.]

Weller, Milton W., and Robert L. Howard. BREEDING OF SPECKLED TEAL *ANAS FLAVIROSTRIS* ON SOUTH GEORGIA. *Br. Antarct. Surv. Bull.* 30. p. 65-68, illus. 1972. [From Biol. Abstr. 56(8), 1973.] *WR 151: 64*
[Iowa State Univ., Ames.]

SWANS & GEESE

Fernando, M. A., I. J. Hoover, and S. G. Ogungbade. THE MIGRATION AND DEVELOPMENT OF *CYATHOSTOMA BRONCHIALIS* IN GEESE. *J. Parasitol.* 59(5): 759-764, 10 figs. Oct. 1973. *WR 151: 64*
[Univ. Guelph, Guelph, Ontario, Canada.] *"Anser cygnoides* and *Branta canadensis."*

Kondla, Norbert G. CANADA GOOSE GOSLINGS LEAVING CLIFF NEST. *Auk* 90(4): 890. Oct. 1973. *WR 151: 64*
[Box 1284, Calgary, Alberta, Canada.] In leaving their cliff-side nest, the Canada goose *(Branta canadensis)* goslings walked from the nest and "slid, bounced, and fell down the cliff."--Courtesy/ Paul A. Stewart.

Kumari, E., editor. [GEESE IN THE USSR / PROCEEDINGS OF A CONFERENCE / ESTONIA, MAY 1970.] *Akad. Nauk Estonskoi SSR.* 180 p., illus. 1972. Price 1 ruble 26 kopecks. Papers in Russian with English summ. *WR 151: 64*
[21 Vanemuise Street, Tartu, Estonian SSR, USSR.] Contents: *Distribution and numbers of the greylag goose population in the Soviet Union*, Y. Isakov; *Present-day status of the greylag goose populations in the Matsalu Bay*, V. Paakspuu; *Nesting of the greylag goose on maritime islets off the west coast of the Saaremaa Island*, L. Aumees; *The spread of the greylag goose on the maritime islands of Estonia*, S. Onno; *Data on the biology of the greylag goose and its hybrids*, M. Valyus; *The greylag goose in the Volga delta (ecology, numbers, reproduction)*, V. Krivenko and G. Krivonossov; *Nesting of the greylag goose on the Caspian Sea*, V. Vinogradov; *The present-day status of the greylag goose in North Kazakhstan and the Altai Steppe*, A. Cheltsov-Bebutov; *Number dynamics and the distribution of the greylag goose in the North Kazakhstan Region*, V. Drobovtsev; *Passage of geese through the Baltic area*, E. Kumari and A. Jõgi; *The passage of the bean goose through the southeastern part of Estonia*, V. Zhelnin; *The specific composition and the numbers of geese during the spring migration in the area of the Oka Nature Reserve*, V. Panchenko and S. Priklonski; *Experiment of aerial counts of geese in the northern part of Eastern Siberia*, S. Uspenski and A. Kishchinski; *Nourishment of geese on the Taimyr Peninsula*, Y. Zharkova and B. Borzhonov; *The redbreasted goose--a species needing special protection*, Y. Isakov; *Character of the spring and autumn passage of geese in the North-Kazakhstan Region*, V. Drobovtsev; *Observations on geese on the northern coast of the Chukotsk Peninsula, 1970*, A. Kishchinski; *On the biology of the emperor goose*, A. Kishchinski; and *Migration routes and the character of the passage of swans and geese in the Far East*, V. Rakhilin.

SWANS & GEESE--Continued

Newton, I., and C. R. G. Campbell. FEEDING OF GEESE ON FARMLAND IN EAST-CENTRAL SCOTLAND. *J. Appl. Ecol.* 10(3): 781-801, 5 figs. Dec. 1973. *WR 151: 65*
[Nature Conservancy, Edinburgh, Scotland.] *"Anser anser* and *A. brachyrhynchus."*

Ryder, John P. BIOLOGY OF NESTING ROSS'S GEESE. *Ardea* 60(3/4): 185-215, illus. 1972. [From Biol. Abstr. 56(5), 1973. In English with Dutch summ.] *WR 151: 65*
[Lakehead Univ., Thunder Bay "P", Ontario, Canada.] *"Anser rossii."*

Talpeanu, Matei. NOTES ECOLOGIQUES SUR *BRANTA RUFICOLLIS.* [ECOLOGICAL NOTES ON *BRANTA RUFICOLLIS.*] *Trav. Mus. Hist. Nat. "Grigore Antipa"* 12. p. 343-354, illus. 1972. [From Biol. Abstr. 56(6), 1973. In French with Romanian and Russian summ.] *WR 151: 65*
[Mus. Hist. Nat. "Grigore Antipa," Bucharest, Romania.]

SHOREBIRDS, MARSH BIRDS & THEIR ALLIES

Adams, A. Michael, James Bunn, Bruce S. Davis, Ann L. Jones, and L. W. Odne. A STUDY OF THE PIG'S EYE LAKE HERON COLONIES. *Loon* 45(2): 32-45, illus. Summer 1973. *WR 151: 65*
[Univ. Minn., St. Paul.]

Ballard, Warren B., and Daniel E. Bowen. CAPTURE METHODS FOR THE UPLAND PLOVER. *Inland Bird Banding News* 45(4): 132-135. July-Aug. 1973. *WR 151: 65*
[Kans. State Univ., Manhattan.] Courtesy/ Paul A. Stewart.

Beightol, Donald R., and David E. Samuel. SONAGRAPHIC ANALYSIS OF THE AMERICAN WOODCOCK'S *PEENT* CALL. *J. Wildl. Manage.* 37(4): 470-474, 4 figs. Oct. 1973. *WR 151: 65*
[W. Va. Univ. County Ext. Office, P.O. Box 1628, Fairmont.] *"Philohela minor."*

Browder, Joan A. LONG-DISTANCE MOVEMENTS OF CATTLE EGRETS. *Bird-Banding* 44 (3): 158-170, 2 figs. Summer 1973. *WR 151: 65*
[Univ. Fla., Gainesville.] *"Bubulcus ibis."*--Courtesy/ Paul A. Stewart.

Bush, Albert O., Danny B. Pence, and Donald J. Forrester. *TETRAMERES (GYNAECOPHILA) WILLIAMSI* SP. N. (NEMATODA: TETRAMERIDAE) FROM THE WHITE IBIS, *EUDOCIMUS ALBUS*, WITH NOTES ON *TETRAMERES (TETRAMERES) GRUSI* SHUMAKOVICH FROM THE SANDHILL CRANE, *GRUS CANADENSIS. J. Parasitol.* 59(5): 788-792, 22 figs. Oct. 1973. *WR 151: 65*
[Univ. Fla., Gainesville.]

Child, Graham. A SURVEY OF MIXED "HERONRIES" IN THE OKAVANGO DELTA, BOTSWANA. *Ostrich* 43(1): 60-62. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 65*
[Natl. Parks Wildl. Manage., Salisbury, Rhodesia.]

Conroy, J. W. H. WILSON'S PHALAROPE *(STEGANOPUS TRICOLOR)* IN THE ANTARCTIC. *Br. Antarct. Surv. Bull.* 26. p. 82-83. 1971. [From Biol. Abstr. 56(8), 1973.] *WR 151: 65*

Czaplińska, Danuta, and Bogdan Czapliński. *RETINOMETRA FULICATRAE* SP. N. (CESTODA, HYMENOLEPIDIDAE) FROM *FULICA ATRA* L. *Acta Parasitol. Polonica* 20(22): 229-232, 1 fig. 1972. In English with Polish summ. *WR 151: 65*
[Inst. Biostructure, Med. School, Warsaw, Poland.]

Demartis, A. Mocci. LE STATUT DE LA POULE SULTANE *(PORPHYRIO PORPHYRIO)* EN SARDAIGNE. [THE STATUS OF THE PURPLE GALLINULE *(PORPHYRIO PORPHYRIO)* IN SARDINIA.] *Aves* 9(4/5): 187-196. 1972. [From Biol. Abstr. 56(5), 1973. In French.] *WR 151: 65*
[Via de Castro 37, Oristano, Italy.]

Jenni, Donald A. REGIONAL VARIATION IN THE FOOD OF NESTLING CATTLE EGRETS. *Auk* 90(4): 821-826, 1 fig. Oct. 1973. *WR 151: 66*

[Univ. Mont., Missoula.] The diet of nestling cattle egrets *(Bubulcus ibis)* in Florida consists primarily of grasshoppers, crickets, frogs, and toads.--Courtesy/ Paul A. Stewart.

Johnson, Oscar W. REPRODUCTIVE CONDITION AND OTHER FEATURES OF SHOREBIRDS RESIDENT AT ENIWETOK ATOLL DURING THE BOREAL SUMMER. *Condor* 75(3): 336-343, 3 figs. Autumn 1973. *WR 151: 66*

[Moorhead State Coll., Moorhead, Minn.] All females of five species contained inactive reproductive organs. The testes of the males showed various degrees of spermatogenic activity. Non-breeding, partial breeding, and full breeding plumages were found among the males. Plumage development and testicular histology were not correlated.--Courtesy/ Paul A. Stewart.

Kempf, C. LE STATUT DE QUELQUES GRANDS ECHASSIERS EN ALSACE. [THE STATUS OF SEVERAL GRALLATORES IN ALSACE (FRANCE).] *Alauda* 41(1/2): 91-99, illus. 1973. [From Biol. Abstr. 56(9), 1973. In French.] *WR 151: 66*

[21 rue de l'Ile-Napoleon, Mulhouse, France.] The migratory habits, history, ecology and distribution of *Ardea cinerea, A. purpurea, Egretta garzetta, E. alba, Ardeola ralloides, Nycticorax nycticorax, Ixobrychus minutus, Botaurus stellaris, Ciconia nigra, Platalea leucorodia* and *Plegadis falcinellus* are described.

Krohn, William B. CAPE MAY WOODCOCK / THEIR MIGRATION AND BEHAVIOR. *N.J. Outdoors* 24(3): 3-7, illus. Sept. 1973. *WR 151: 66*

Results of banding activities during 1968-1972 are summarized.

Kuenzel, Wayne J., and Richard G. Wiegert. ENERGETICS OF A SPOTTED SANDPIPER FEEDING ON BRINE FLY LARVAE *(PARACOENIA*; DIPTERA: EPHYDRIDAE*)* IN A THERMAL SPRING COMMUNITY. *Wilson Bull.* 85(4): 473-476, 1 fig. Dec. 1973. *WR 151: 66*

[Cornell Univ., Ithaca, N.Y.] A spotted sandpiper *(Actitis macularia)* was seen foraging at flowing hot springs in Yellowstone National Park.--Courtesy/ Paul A. Stewart.

Kushlan, James A. PROMISCUOUS MATING BEHAVIOR IN THE WHITE IBIS. *Wilson Bull.* 85(3): 331-332. Sept. 1973. *WR 151: 66*

[Univ. Miami, Coral Gables, Fla.] *"Eudocimus albus."*--Courtesy/ Paul A. Stewart.

Majic, Josip, and Jozsef Mikuska. GNI JEZDENJE CAPLJI U KOPACEVSKOM REZERVATU I BLIZOJ OKOLINI U PERIODU OD 1954, DO 1970 GODINE. [ON BREEDING OF HERONS IN THE KOPACEVO PRESERVE AND SURROUNDING AREA FROM 1954 TO 1970.] *Larus* 24: 65-77, illus. 1970. [From Biol. Abstr. 56(10), 1973. In Serbo-Croatian with German summ.] *WR 151: 66*

[Goricka 8, 54000 Osijek, Yugoslavia.]

Miller, Richard S. THE BROOD SIZE OF CRANES. *Wilson Bull.* 85(4): 436-441. Dec. 1973. *WR 151: 66*

[Yale Univ., New Haven, Conn.] Whooping and sandhill cranes *(Grus americana* and *G. canadensis)* normally lay clutches of two eggs, but the brood size is usually reduced to one young by abandonment of the second egg after the first has hatched or by sibling rivalry, resulting in the death of the second chick.--Courtesy/ Paul A. Stewart.

Mrugasiewicz, Adam. BOCIAN BIALY, *CICONIA CICONIA* (L.) W POWIECIE MILICKIM W LATACH 1959-1968. [WHITE STORK, *CICONIA CICONIA* (L.) OVER THE DISTRICT OF MILICZ IN THE YEARS 1959-1968.] *Acta Ornithol.* (Warsaw) 13(7): 243-278, illus. 1972. [From Biol. Abstr. 56(7), 1973. In Polish with Russian and English summ.] *WR 151: 66*

[Univ. Wroclaw, Wroclaw, Poland.]

SHOREBIRDS, MARSH BIRDS & THEIR ALLIES--Continued

Norton, David William. ECOLOGICAL ENERGETICS OF CALDRIDINE SANDPIPERS BREEDING IN NORTHERN ALASKA. *Ph.D. thesis, Univ. Alaska.* 193 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973. Pages 41-54 (previously copyrighted material) not microfilmed at request of author. Available for consultation at University of Alaska Library.] *WR 151: 67*

Olson, Storrs L. A CLASSIFICATION OF THE RALLIDAE. *Wilson Bull.* 85(4): 380-416, 7 figs. + 1 pl. Dec. 1973. *WR 151: 67*
[Natl. Mus. Nat. Hist., Washington, D.C.] Courtesy/ Paul A. Stewart.

Pennycuick, C. J., and G. A. Bartholomew. ENERGY BUDGET OF THE LESSER FLAMINGO *(PHOENICONAIAS MINOR* GEOFFROY*)*. *E. Afr. Wildl. J.* 11(2): 199-207, 1 fig. June 1973. *WR 151: 67*
[Univ. Bristol, Bristol, England.]

Pratt, Helen M. BREEDING ATTEMPTS BY JUVENILE GREAT BLUE HERONS. *Auk* 90(4): 897-899. Oct. 1973. *WR 151: 67*
[Point Reyes Bird Observatory, Bolinas, Calif.] Two great blue herons *(Ardea herodias)* were reported nesting when in the juvenal plumage.--Courtesy/ Paul A. Stewart.

Reese, Jan G. UNUSUAL FEEDING BEHAVIOR OF GREAT BLUE HERONS AND COMMON EGRETS. *Condor* 75(3): 352. Autumn 1973. *WR 151: 67*
["Bradford," St. Michaels, Md.] "The herons *(Ardea herodias)* and egrets *(Casmerodius albus)* were nesting on Poplar Island and were flying just above the water to and from the floating fish. When spearing for fish, the herons assumed a position with the body nearly vertical, legs down (some in the water), wings flapping in a backward motion, and held the neck outstretched."--Courtesy/ Paul A. Stewart.

Rencurel, Paul. OBSERVATIONS SUR LA NIDIFICATION DU HERON GARDE-BOEUFS *ARDEOLA IBIS* (L.) DANS L'ILE DU BOU-REGREG. [OBSERVATIONS ON THE NEST BUILDING OF THE CATTLE EGRET *ARDEOLA IBIS* (L.) ON THE ISLAND OF BOU-REGREG.] *Alauda* 40 (3): 278-286, illus. 1972. [From Biol. Abstr. 56(6), 1973. In French.] *WR 151: 67*
[Rue Zyaydah, Aviat. Civ., Rabat, Morocco.]

Samuel, David E., and Donald R. Beightol. THE VOCAL REPERTOIRE OF MALE AMERICAN WOODCOCK. *Auk* 90(4): 906-909, 1 fig. Oct. 1973. *WR 151: 67*
[W. Va. Univ., Morgantown.] Suggests functions for various calls of the American woodcock *(Philohela minor)*.--Courtesy/ Paul A. Stewart.

Schmidt, Gerald D., and Charles H. Courtney. *PARVITAENIA HEARDI* SP. N. (CESTOIDEA: DILEPIDIDAE) FROM THE GREAT BLUE HERON, *ARDEA HERODIAS*, IN SOUTH CAROLINA. *J. Parasitol.* 59(5): 821-823, 6 figs. Oct. 1973. *WR 151: 67*
[Univ. Northern Colo., Greeley.]

Wenstrom, William Peter. HABITAT UTILIZATION AND ACTIVITIES OF FEMALE AMERICAN WOODCOCK *(PHILOHELA MINOR* GMELIN*)* IN NORTHEASTERN MINNESOTA DURING SPRING AND SUMMER. *Ph.D. thesis, Univ. Minn.* 224 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(6), 1973.] *WR 151: 67*

Zimmerman, Dale A. CATTLE EGRETS IN NORTHERN MÉXICO. *Condor* 75(4): 480-481. Winter 1973. *WR 151: 67*
[Western N. Mex. Univ., Silver City.] *"Bubulcus ibis."*--Courtesy/ Paul A. Stewart.

SEABIRDS & THEIR ALLIES

Bailey, Edgar P. DISCOVERY OF A KITTLITZ'S MURRELET NEST. *Condor* 75(4): 457. Winter 1973. *WR 151: 67*
[Aleutian Island Natl. Wildl. Refuge, Pouch #2, Cold Bay, Alaska.] *"Brachyramphus brevirostre."*--Courtesy/ Paul A. Stewart.

Bartholomew, G. A., and C. J. Pennycuick. THE FLAMINGO AND PELICAN POPULATIONS OF THE RIFT VALLEY LAKES IN 1968-69. *E. Afr. Wildl. J.* 11(2): 189-198, 3 figs. June 1973. *WR 151: 68*
[Univ. Calif., Los Angeles.]

Berkleshova, A. Yu., V. A. Smirnov, and I. I. Terskikh. [ROLE OF MARINE BIRDS AND THEIR ECTOPARASITES IN THE EPIZOOTIC PROCESS.] *Vopr. Virusol.* 16(5): 596-600. 1971. [From Biol. Abstr. 56(8), 1973. In Russian with English summ.] *WR 151: 68*
[D. I. Ivanovskii Inst. Virol., Acad. Med. Sci., USSR, Moscow, USSR.]

Birkenmajer, Krzysztof. ROZROST KOLONII MEWY MODRODZIOBEJ W POLUDNIOSYM SPITSBERGENIE. [THE GROWTH OF THE COLONIES OF IVORY GULL IN SOUTHERN SPITSBERGEN.] *Przegl. Zool.* 16(1): 59-61, illus. 1972. [From Biol. Abstr. 56(8), 1973. In Polish with English summ.] *WR 151: 68*
[Pol. Akad. Nauk, Krakow, Poland.] *"Pagophila eburnea."*

Bourget, André A. RELATION OF EIDERS AND GULLS NESTING IN MIXED COLONIES IN PENOBSCOT BAY, MAINE. *Auk* 90(4): 809-820, 3 figs. Oct. 1973. *WR 151: 68*
[Canadian Wildl. Serv., 1141 Rte. de L'Eglise, Ste-Foy, Quebec, Quebec, Canada.] Predation by herring gulls *(Larus argentatus)* and black-backed gulls *(L. marinus)* was the major factor of egg losses among common eiders *(Somateria mollisima)* breeding on four islands studied along the Maine coast. The black-backed gull, although less numerous than the herring gull on the study area, was more predatory than the latter on eider eggs and young. This was partly due to the fact that the early nesting black-backed gull spent at least 2 weeks more time on the nesting islands in association with the eiders than did the herring gull.--From summ. Courtesy/ Paul A. Stewart.

Cuthbert, Francesca J., and William E. Southern. RING-BILLED GULL RELOCATES NEST AS A RESULT OF EGG DISPLACEMENT. *Bird-Banding* 44(3): 225-227, 2 figs. Summer 1973. *WR 151: 68*
[Northern Ill. Univ., DeKalb.] *"Larus delawarensis."*--Courtesy/ Paul A. Stewart.

Escalante, Rodolfo. THE CAYENNE TERN IN BRAZIL. *Condor* 75(4): 470-472. Winter 1973. *WR 151: 68*
[Guayaquí 3425, Apto. 301, Montevideo, Uruguay.] *"Thalasseus eurygnathus."*--Courtesy/ Paul A. Stewart.

Feare, Christopher J. RESEARCH ON SOOTY TERNS IN SEYCHELLES. *Biol. Conserv.* 5(3): 236-238, 3 figs. July 1973. *WR 151: 68*
[c/o Dep. Agric., Port Victoria, Mahé, Seychelles.] *"Sterna fuscata."*

Hatch, David R. M. HATCHED EGG-SHELLS COVERING COMMON TERN EGGS. *Blue Jay* 31(2): 91. June 1973. *WR 151: 68*
[Manitoba Mus. Man & Nature, 190 Rupert Ave., Winnipeg, Manitoba, Canada.]

Hunt, George L., Jr., and Molly W. Hunt. HABITAT PARTITIONING BY FORAGING GULLS IN MAINE AND NORTHWESTERN EUROPE. *Auk* 90(4): 827-839, 3 figs. Oct. 1973. *WR 151: 68*
[Univ. Calif., Irvine.] Summary: Comparisons were made of the partitioning of foraging habitats by three species of gulls in Maine *(Larus marinus, L. argentatus,* and *L. atricilla)* and six species in Scotland and Norway *(L. marinus, L. fuscus, L. argentatus, L. ridibundus, L. canus,* and *Rissa tridactyla).* Feeding habitat diversity was found to be generally similar in Maine and Europe, although species diversity within each foraging habitat was greater in two areas studied in Europe. The data support the notion that gulls in Europe have remained generalists and that packing in new species into areas of sympatry has been accomplished by adding new niches (fields and feeding at sea). It is suggested that the availability of waste has reduced selective pressure for greater specialization within natural areas by providing an alternative food resource.--Courtesy/ Paul A. Stewart.

Hunt, George L., Jr., and Molly W. Hunt. CLUTCH SIZE, HATCHING SUCCESS, AND EGGSHELL-THINNING IN WESTERN GULLS. *Condor* 75(4): 483-486. Winter 1973. *WR 151: 69*

[Univ. Calif., Irvine.] Relatively large clutches of eggs were laid by western gulls *(Larus occidentalis)*, however, eggshell thickness was reduced and hatching success was low.--Courtesy/ Paul A. Stewart.

Imber, M. J. THE FOOD OF GREY-FACED PETRELS *(PTERODROMA MACROPTERA GOULDI* (HUTTON)), WITH SPECIAL REFERENCE TO DIURNAL VERTICAL MIGRATION OF THEIR PREY. *J. Anim. Ecol.* 42(3): 645-662. Oct. 1973. *WR 151: 69*

[Wildl. Serv., Dep. Internal Affairs, Wellington, New Zealand.] The food of grey-faced petrels in December comprises approximately 58% Cephalopoda, 28% fish, 12% Crustacea and 2% Tunicata by weight. Little seasonal variation was found but data on this aspect were very limited. Over 95% of the food is taken beyond the continental shelf. Of prey presumed captured, few would be available in daylight at the sea's surface where these petrels obtain their food.--From summ.

Jarvis, M. J. F. A COMPARISON OF METHODS IN A BEHAVIOR STUDY OF THE SOUTH AFRICAN GANNET. *Zool. Afr.* 7(1): 75-83. 1972. [From Biol. Abstr. 56(5), 1973.] *WR 151: 69*

[Univ. Cape Town, Cape Town, South Africa.] *"Sula capensis."*

Johnson, Oscar W. UNUSUAL VENOUS PLAIN IN FRIGATEBIRD KIDNEYS. *Auk* 90(4): 901-902, 1 fig. Oct. 1973. *WR 151: 69*

[Moorhead State Coll., Moorhead, Minn.] *"Fregata minor."*--Courtesy/ Paul A. Stewart.

King, Warren B., and Jeffrey L. Lincer. DDE RESIDUES IN THE ENDANGERED HAWAIIAN DARK-RUMPED PETREL *(PTERODROMA PHAEOPYGIA SANDWICHENSIS)*. *Condor* 75 (4): 460-461. Winter 1973. *WR 151: 69*

[Mote Marine Lab., 9501 Blind Pass Rd., Sarasota, Fla.] Data showing that there are measureable amounts of DDT metabolites in the ecosystem of the central Pacific Ocean are presented.--Courtesy/ Paul A. Stewart.

Leck, Charles F. PELICANS IN THE CITY OF LIMA, PERU. *Condor* 75(3): 357. Autumn 1973. *WR 151: 69*

[Rutgers Univ., New Brunswick.] *"Pelecanus thagus."*--Courtesy/ Paul A. Stewart.

McNicholl, Martin K. HABITUATION OF AGGRESSIVE RESPONSES TO AVIAN PREDATORS BY TERNS. *Auk* 90(4): 902-904. Oct. 1973. *WR 151: 69*

[Univ. Alberta, Edmonton, Alberta, Canada.] Predatory birds nesting within areas occupied by colonies of nesting terns were attacked by the terns only when the predators were not near their nests.--Courtesy/ Paul A. Stewart.

McNicholl, Martin K. VOLUME OF FORSTER'S TERN EGGS. *Auk* 90(4): 915-917. Oct. 1973. *WR 151: 69*

[Univ. Alberta, Edmonton, Alberta, Canada.] Data from eggs of Forster's terns *(Sterna forsteri)* were used to compare the validity of several methods for determining egg volumes.--Courtesy/ Paul A. Stewart.

Milsom, William K., Kjell Johansen, and Ronald W. Millard. BLOOD RESPIRATORY PROPERTIES IN SOME ANTARCTIC BIRDS. *Condor* 75(4): 472-474, 2 figs. Winter 1973. *WR 151: 69*

[Univ. Wash., Seattle.] The adaptive value of the blood respiratory properties is discussed in the context of behavior and mode of life of the three species of penguins studied *(Pygoscelis adeliae, P. papua* and *P. antartica)*. Less comprehensive information was obtained from *Macronectes giganteus* and *Catharacta skua*.--Courtesy/ Paul A. Stewart.

Moisan, G., and B. Scherrer. DEPLACEMENTS SAISONNIERS DES FOUS DE BASSAN DE L'ILE BONAVENTURE (CANADA) *(SULA BASSANA)*. [SEASONAL DISPLACEMENT OF GANNETS *SULA BASSANA* FROM BONAVENTURE ISLAND (CANADA).] *Terre Vie* 1973(3): 414-434, 9 figs. July-Sept. 1973. In French with English summ. *WR 151: 70*

[Min. Tourism Hunting & Fishing, Quebec, Canada.] Analysis of recoveries from 11,000 banded juvenile gannets.

O'Donald, Peter. NATURAL SELECTION OF REPRODUCTIVE RATES AND BREEDING TIMES AND ITS EFFECT ON SEXUAL SELECTION. *Am. Nat.* 106(949): 368-379. May-June 1972. *WR 151: 70*

[Univ. Cambridge, Cambridge, England.] Data of reproductive rates and breeding times in the Arctic skua show that the earlier breeders have the higher fitnesses. A quadratic model of the relation between fitness and breeding time gives a very close fit to the data. The results are used to estimate the selective coefficient of males who possess a sexual advantage. The sexual selection is found to be frequency dependent, and the selective coefficient increases as the males with the sexual advantage increase in frequency in the population.--From summ.

Osborne, Timothy O. RECENT NESTING OF THE RHINOCEROS AUKLET IN CALIFORNIA. *Condor* 75(4): 463-464. Winter 1973. *WR 151: 70*

[Calif. State Univ., Arcata.] *"Cerorhinca monocerata."*--Courtesy/ Paul A. Stewart.

Panov, E. N. [INTERSPECIFIC CROSSING AND THE FATE OF INTERBRED POPULATION. *(LANIUS COLLURIO* L. AND *LANIUS PHOENICUROIDES* SCHALOW TAKEN AS AN EXAMPLE.).] *Zh. Obshch. Biol.* 33(4): 409-427, illus. 1972. [From Biol. Abstr. 56(7), 1973. In Russian with English summ.] *WR 151: 70*

[Siberian Div., Acad. Sci. USSR, Novosibirsk, USSR.]

Sealy, Spencer G. BREEDING BIOLOGY OF THE HORNED PUFFIN ON ST. LAWRENCE ISLAND, BERING SEA, WITH ZOOGEOGRAPHICAL NOTES ON THE NORTH PACIFIC PUFFINS. *Pac. Sci.* 27(2): 99-119, illus. 1973. [From Biol. Abstr. 56(6), 1973.] *WR 151: 70*

[Univ. Manitoba, Winnipeg, Manitoba, Canada.] *"Fratercula corniculata* and *Lunda cirrhata."*

Sealy, Spencer G. INTERSPECIFIC FEEDING ASSEMBLAGES OF MARINE BIRDS OFF BRITISH COLUMBIA. *Auk* 90(4): 796-802. Oct. 1973. *WR 151: 70*

[Univ. Manitoba, Winnipeg, Manitoba, Canada.] Monospecific feeding often occurred before mixed feeding assemblages were encountered and also when mixed feeding assemblages were active. "Thus it appears that these local concentrations of food provide only temporary and/or supplemental food resources for most of the species involved."--Courtesy/ Paul A. Stewart.

Soikkeli, Martti. BREEDING SUCCESS OF THE CASPIAN TERN IN FINLAND. *Bird-Banding* 44(3): 196-204, 1 fig. Summer 1973. *WR 151: 70*

[Univ. Turku, Turku, Finland.] Caspian terns *(Hydroprogne caspia)* started egg laying in early May and stopped in early July. The mean clutch size was 2.70 before 21 May, but it decreased to 1.61 after 10 June. Chick mortality averaged 13%; about 1.5 young fledged per breeding pair.--Courtesy/ Paul A. Stewart.

Vermeer, Kees. FOOD HABITS AND BREEDING RANGE OF HERRING GULLS IN THE CANADIAN PRAIRIE PROVINCES. *Condor* 75(4): 478-480, 1 fig. Winter 1973. *WR 151: 70*

[515 Centennial Bldg., Edmonton, Alberta, Canada.] The chief food was dead and dying fish, stranded in creeks after going there from lakes to spawn.--Courtesy/ Paul A. Stewart.

HAWKS & OWLS

Berger, R., and J. Walker. SLEEP IN THE BURROWING OWL *(SPEOTYTO CUNICULARIA HYPUGAEA)*. *Behav. Biol.* 7(2): 183-194. 1972. [From Bird-Banding 44(3), 1973.] *WR 151: 71*

Butts, Kenneth Olin. LIFE HISTORY AND HABITAT REQUIREMENTS OF BURROWING OWLS IN WESTERN OKLAHOMA. *M.S. thesis, Okla. State Univ.* ix + 188 p., 13 figs. Dec. 1973. *WR 151: 71*
Courtesy/ James C. Lewis.

Cooper, J. E. SOME HAEMATOLOGICAL DATA FOR BIRDS OF PREY. *Raptor Res.* 6(4): 133-136. Winter 1972. *WR 151: 71*
[Veterinary Res. Lab., P.O. Kabete, Kenya.] Abstract: Haemoglobin and pack cell values are given for 17 "normal" East African birds of prey of 12 species. The significance of such data is discussed.

Cooper, John E. POST-MORTEM FINDINGS IN EAST AFRICAN BIRDS OF PREY. *J. Wildl. Dis.* 9(4): 368-375, 1 fig. Oct. 1973. *WR 151: 71*
[Veterinary Res. Lab., P.O. Kabete, Kenya.] Abstract: The causes of mortality and other *post-mortem* findings from 31 free-living and 12 captive East African raptors of 20 species are reported. Seventeen (39.5%) died as a result of trauma and only 4 (9.3%) of infectious disease (acid-fast bacterial infection, aspergillosis, nocardiosis, coliform pneumonia and pancreatitis). Other conditions encountered were anaesthetic overdose, predation, starvation, dehydration, cloacal impaction, pulmonary congestion and osteodystrophy. The causes of mortality are compared with those reported in similar surveys from other parts of the world.

Downing, Robert L. A PRELIMINARY NESTING SURVEY OF LEAST TERNS AND BLACK SKIMMERS IN THE EAST. *Am. Birds* 27(6): 946-949. Dec. 1973. *WR 151: 71*
[U.S. Bur. Sport Fisheries & Wildl., Blacksburg, Va.] *"Sterna albifrons* and *Rynchops nigra."*

Drury, William H. POPULATION CHANGES IN NEW ENGLAND SEABIRDS. *Bird-Banding* 44(4): 267-313, 4 figs. Autumn 1973. *WR 151: 71*
[Mass. Audubon Soc., Lincoln.] This first installment of a continued report includes information on population changes of 14 spp. during the past 75 years.--Courtesy/ Paul A. Stewart.

Edeburn, Ralph M. GREAT HORNED OWL IMPALED ON BARBED WIRE. *Wilson Bull.* 85 (4): 478. Dec. 1973. *WR 151: 71*
[Box 42, R.D. 1, Mercer, Pa.] The great horned owl *(Bubo virginianus)* had a wing caught by the barbs of the fence.--Courtesy/ Paul A. Stewart.

Fitzpatrick, John W. RESPONSE BY A LONG-EARED OWL TO BARRED OWL CALLS. *Wilson Bull.* 85(3): 334-335. Sept. 1973. *WR 151: 71*
[40 Mallard Rd., St. Paul, Minn.] *"Asio otus* and *Strix varia."*

Fuller, Mark R., Patrick T. Redig, and Gary E. Duke. RAPTOR REHABILITATION AND CONSERVATION IN MINNESOTA. *Loon* 45(2): 50-55. Summer 1973. *WR 151: 71*
[Univ. Minn., St. Paul.]

Graham, David Lee. STUDIES ON INCLUSION BODY DISEASE (HERPESVIRUS INFECTION) OF FALCONS. *Ph.D. thesis, Iowa State Univ.* 125 p. 1973. [From Diss. Abstr. Int. B Sci. Eng. 34(5), 1973.] *WR 151: 71*
Inclusion body disease (herpesvirus infection) of falcons (IBDF) has been diagnosed in 4 prairie falcons *(Falco mexicanus)*, 1 gyrfalcon *(F. rusticolis)*, 1 peregrine falcon *(F. peregrinus)*, and 1 red-headed falcon *(F. chiquera)*.

Hamerstrom, Frances, and Frederick Hamerstrom. *TRANSLATION:* A MALE HAWK'S POTENTIAL IN NEST BUILDING, INCUBATION AND REARING YOUNG. *Raptor Res.* 6(4): 144-149, 1 fig. Winter 1972. Translation from German. *WR 151: 71*
[RFD, Plainfield, Wis.] Translation of POTENTIAL EINES MÄNNLICHEN GREIFVOGELS *(BUTEO JAMAICENSIS)* IN BEZUG AUF NESTBAU, BRÜTEN UND JUNGENAUFZUCHT. *Vogelwarte* 26(2): 192-197. 1971.

Hamerstrom, Frances, and Keith Janick. DIURNAL SLEEP RHYTHM OF A YOUNG BARRED OWL. *Auk* 90(4): 899-900. Oct. 1973. *WR 151: 72*
[Univ. Wis., Plainfield.] Reports of sleeping, dozing, and wakefulness for a barred owl *(Strix varia)* during one continuous daylight period.--Courtesy/ Paul A. Stewart.

Hamerstrom, Frances, and Deann De La Ronde Wilde. CRUISING RANGE & ROOSTS OF ADULT HARRIERS. *Inland Bird Banding News* 45(4): 123-127, 2 figs. July-Aug. 1973. *WR 151: 72*
[Plainfield, Wis.] The daily cruising range of a pair of harriers *(Circus cyaneus hudsonius)* covered an area one and one quarter by two and three quarter miles in size.--Courtesy/ Paul A. Stewart.

Kaufman, Donald W. CAPTIVE BARN OWLS STOCKPILE PREY. *Bird-Banding* 44(3): 225. Summer 1973. *WR 151: 72*
[Univ. Tex., Austin.] *"Tyto alba."*--Courtesy/ Paul A. Stewart.

Kaufman, Donald W. USE OF MARKED PREY TO STUDY RAPTOR PREDATION. *Wilson Bull.* 85(3): 335-336. Sept. 1973. *WR 151: 72*
[Univ. Tex., Austin.] Presumably because of different manners of eating their prey, a larger proportion of subcutaneous pins were recovered from pellets of barn owls *(Tyto alba)* than from those of screech owls *(Otus asio)*.--Courtesy/ Paul A. Stewart.

Kennedy, Robert S. NOTES ON THE MIGRATION OF JUVENILE OSPREYS FROM MARYLAND AND VIRGINIA. *Bird-Banding* 44(3): 180-186, 2 figs. Summer 1973. *WR 151: 72*
[La. State Univ., Baton Rouge.] Juvenile ospreys *(Pandion haliaetus)* start southward from Maryland and Virginia during the last week of August, following a narrow coastal strip. Most birds leave the United States by September and reach the main wintering grounds in Colombia by mid-October.--Courtesy/ Paul A. Stewart.

Konishi, Masakazu. LOCATABLE AND NONLOCATABLE ACOUSTIC SIGNALS FOR BARN OWLS. *Am. Nat.* 107(958): 775-785, 3 figs. Nov.-Dec. 1973. *WR 151: 72*
[Princeton Univ., Princeton, N.J.] *"Tyto alba."*

Kushlan, James A. SPREAD-WING POSTURING IN CATHARTID VULTURES. *Auk* 90(4): 889-890. Oct. 1973. *WR 151: 72*
[Univ. Miami, Coral Gables, Fla.] "I believe the vultures I watched assumed the spread-wing postures to increase the effectiveness of the sun's radiant energy in raising their body temperatures."--Courtesy/ Paul A. Stewart.

Martin, Dennis J. SELECTED ASPECTS OF BURROWING OWL ECOLOGY AND BEHAVIOR. *Condor* 75(4): 446-456, 4 figs. Winter 1973. *WR 151: 72*
[Utah State Univ., Logan.] *"Speotyto cunicularia."* The following are discussed: nesting habitat, burrows, reproductive success, sexual dimorphism, wandering, migration, pair formation, burrow selection, nest preparation, pre-copulatory behavior, copulatory behavior, egg laying, incubation, brooding, territoriality, feeding behavior, behavior of the young, response to predators, and mobbing.--Courtesy/ Paul A. Stewart.

McCarthy, Timothy. OCULAR IMPALEMENT OF A GREAT HORNED OWL. *Wilson Bull.* 85 (4): 477-478. Dec. 1973. *WR 151: 72*
[Milwaukee Public Mus., Milwaukee, Wis.] A living great horned owl *(Bubo virginianus)* was found held by an eye impaled on a barbed wire fence.--Courtesy/ Paul A. Stewart.

Monneret, R.-J. ETUDE D'UNE POPULATION DE FAUCONS PELERINS DANS UNE REGION DE L'EST DE LA FRANCE: ANALYSE DES CAUSES POSSIBLES DE REGRESSION. [STUDY OF THE POPULATION OF PEREGRINE FALCONS IN EASTERN FRANCE: ANALYSIS OF POSSIBLE CAUSES FOR THEIR DECLINE.] *Alauda* 41(1/2): 121-128, illus. 1973. [From Biol. Abstr. 56(9), 1973. In French with English summ.] *WR 151: 72*
[43 rue Edgar Quinet, St.-Maurdes-Fosses, France.]

Mueller, Helmut C. THE RELATIONSHIP OF HUNGER TO PREDATORY BEHAVIOUR IN HAWKS *(FALCO SPARVERIUS* AND *BUTEO PLATYPTERUS). Anim. Behav.* 21(3): 513-520, 4 figs. Aug. 1973. *WR 151: 73*

[Univ. N.C., Chapel Hill.] Abstract: The relationship of hunger (as measured by food consumption) to predatory behaviour in two species of falconiform birds was investigated in the laboratory. The tendency to kill prey was correlated with hunger, and only hungry birds killed prey. I suggest that there is no predatory instinct or drive which operates independently of hunger and offer other rationales for the occasional excessive killing by some vertebrate predators. *Falco sparverius* exhibited a circadian rhythm of hunger and killing tendency, with a peak in the late afternoon. *Buteo platypterus* possibly showed a slight peak in the morning.

Proctor, Noble S. MARSH HAWK CATCHES FISH. *Wilson Bull.* 85(3): 332. Sept. 1973. *WR 151: 73*

[Southern Conn. State Coll., 501 Crescent St., New Haven.] The method used by a marsh hawk *(Circus cyaneus)* to capture a fish is described.--Courtesy/ Paul A. Stewart.

Schmidt, Egon, and Andrej Stollmann. POTRAVA PLAMIENKY DRIEMAVEJ *(TYTO ALBA GUTTATA* BREHM, 1831*)* V TURCIANSKEJ KOTLINE. [FOOD OF THE BARN OWL *(TYTO ALBA GUTTATA* BREHM, 1831*)* IN THE TURCIANSKA KOTLINA BASIN.] *Zb. Slov. Nar. Mus. Prir. Vedy* 18(1): 139-142, illus. 1972. [From Biol. Abstr. 56(12), 1973. With German summ.] *WR 151: 73*

Smith, Dwight G., Charles R. Wilson, and Herbert H. Frost. SEASONAL FOOD HABITS OF BARN OWLS IN UTAH. *Great Basin Nat.* 32(4): 229-234. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 73*

[Conn. State Coll., New Haven.]

Snyder, Noel F. R., and Helen A. Snyder. EXPERIMENTAL STUDY OF FEEDING RATES OF NESTING COOPER'S HAWKS. *Condor* 75(4): 461-463. Winter 1973. *WR 151: 73*

[Box 21, Palmer, Puerto Rico.] "The results suggest that under the circumstances of the experiment adult hawks did little, if anything, to compensate for changes in numbers of young by alternating hunting rates."--Courtesy/ Paul A. Stewart.

Stendell, Rey C., and Philip Myers. WHITE-TAILED KITE PREDATION ON A FLUCTUATING VOLE POPULATION. *Condor* 75(3): 359-360. Autumn 1973. *WR 151: 73*

[Patuxent Wildl. Res. Cent., Laurel, Md.] White-tailed kites *(Elanus leucurus)* foraged over the same areas in successive years despite marked changes in abundance of their prey.--Courtesy/ Paul A. Stewart.

Todd, Frank S. CAPTIVE BREEDING OF HARPY EAGLES. *Raptor Res.* 6(4): 137-143. Winter 1972. *WR 151: 73*

[Sea World, 1720 South Shores Rd., Mission Bay, San Diego, Calif.] Abstract: A breeding project involving a pair of Harpy Eagles *(Harpia harpyja)* was initiated at the Los Angeles Zoo in January 1970. To date, a total of 11 eggs and three hatchings have resulted. The first two eaglets were lost within hours, but the third survived 16 days. Data on procedures, behavior, incubation and rearing are presented as well as recommendations.

Toso, Silvano. OSSERVAZIONI DI RAPACI DIURNI IN SARDEGNA. [OBSERVATIONS OF DIURNAL BIRDS OF PREY IN SARDINIA.] *Riv. Ital. Ornitol.* 42(4): 435-444. 1972. [From Biol. Abstr. 56(9), 1973. In Italian.] *WR 151: 73*

"Accipiter gentilis, A. nisus, Buteo buteo, Hieraaetus fasciatus, Aquila chrysaetos, Gyps fulvus, Falco biarmicus, F. peregrinus brookei, F. eleonorae, F. naumanni, F. tinnunculus and *Pyrrhocorax graculus."*

Varshavskii, B. [SOME ECO-AREAL FEATURES OF THE FORAGING OF THE LONG-LEGGED BUZZARD, IMPERIAL EAGLE, AND STEPPE EAGLE IN THE NORTH ARAL REGION.] *Byull. Mosk. O-va Ispyt. Prir. Otd. Biol.* 78(3): 30-37. 1973. [From Bird-Banding 44 (4), 1973. In Russian with English summ.] *WR 151: 73*

"Buteo rufinus, Aquila heliaca, and *A. nipalensis."*

HAWKS & OWLS--Continued

Vernon, C. J. ON THE LIFE-EXPECTANCY OF THE MATOPOS BLACK EAGLES. *Ostrich* 43(4): 206-210, illus. 1972. [From Biol. Abstr. 56(5), 1973.] *WR 151: 74*
"Aquila verreauxi."

Wiley, James W., and Fred E. Lohrer. ADDITIONAL RECORDS OF NON-FISH PREY TAKEN BY OSPREYS. *Wilson Bull.* 85(4): 468-470. Dec. 1973. *WR 151: 74*
[16341 Skymeadow Dr., Placentia, Calif.] Non-fish prey of ospreys *(Pandion haliaetus)* was chiefly cotton rats *(Sigmodon hispidus)*.--Courtesy/ Paul A. Stewart.

BLACKBIRDS, STARLINGS, CROWS

Bird, Joan, John Alcock, and W. James Erckmann. STARLINGS STEALING WORMS FROM ROBINS. *Wilson Bull.* 85(4): 480-482. Dec. 1973. *WR 151: 74*
[4300 4th Ave. NE, Seattle, Wash.] The manner and rate of success with which starlings *(Sturnus vulgaris)* stole worms from robins *(Turdus migratorius)* are described.--Courtesy/ Paul A. Stewart.

Bogucki, Zdzislaw. STUDIES ON THE ACTIVITY OF STARLINGS *STURNUS VULGARIS* LINNAEUS, 1758, IN THE BREEDING SEASON. *Acta Zool. Cracov.* 17(4): 97-121, illus. 1972. [From Biol. Abstr. 56(5), 1973. In English with Polish and Russian summ.] *WR 151: 74*
[Poznan Univ., Poznan, Poland.]

Carter, J. M., A. G. Canaris, and J. R. Bristol. A SURVEY OF THE PARASITES OF STARLINGS *(STURNUS VULGARIS L.)* IN EL PASO COUNTY, TEXAS. *J. Parasitol.* 59 (5): 775. Oct. 1973. *WR 151: 74*
[Univ. Tex., El Paso.]

Cooper, C. Lawrence. A CHECK LIST OF THE HELMINTH PARASITES OF THE BLUE JAY. *Passenger Pigeon* 35(4): 191-193. Winter 1973. *WR 151: 74*
[Ohio State Univ., Columbus.]

Crawford, Robert L. WINTERING NORTHERN ORIOLES IN THOMASVILLE, GEORGIA. *Oriole* 38(1): 6-9, 1 fig. Mar. 1973. *WR 151: 74*
[Tall Timbers Res. Stn., Rt. 1, Box 160, Tallahassee, Fla.] *"Icterus galbula."*

DeHaven, Richard W. WINTER POPULATION TRENDS OF THE STARLING IN CALIFORNIA. *Am. Birds* 27(5): 836-838, 2 figs. Oct. 1973. *WR 151: 74*
[Denver Wildl. Res. Cent., Box C, Davis, Calif.]

Gabrion, Claude. RELATIONS ENTRE L'HELMINTHOFAUNE DE LA PIE *(PICA PICA L.)* ET LES BIOTOPES DE CAPTURE DANS LE SUD DE LA FRANCE. [RELATION BETWEEN THE HELMINTHOFAUNA OF THE MAGPIE *PICA PICA* L. AND THEIR BIOTOPES IN SOUTHERN FRANCE.] *Terre Vie* 1973(4): 607-614, 2 figs. Oct.-Dec. 1973. In French with English summ. *WR 151: 74*
[Univ. Sci. & Tech. Langedoc, Montpellier, France.]

Korodi, G. BEITRAGE ZUR KENNTNIS DER BRUTBIOLOGIE UND BRUTNAHRUNG DER EICHELHAHER, *(GARRULUS GLANDARIUS L.)*. [BREEDING BIOLOGY AND NESTLING FOOD OF THE COMMON JAY.] *Trav. Mus. Hist. Nat. "Grigore Antipa"* 12: 355-383. 1972. [From Bird-Banding 44(4), 1973. In German with Romenian, Russian and French summ.] *WR 151: 74*

Krapu, Gary L. RED-WINGED BLACKBIRDS NESTING NEAR GREAT SLAVE LAKE, N.W.T. *Blue Jay* 31(3): 147-149, illus. Sept. 1973. *WR 151: 74*
[Northern Prairie Wildl. Res. Cent., Jamestown, N. Dak.]

Marder, Jacob. BODY TEMPERATURE REGULATION IN THE BROWN-NECKED RAVEN *(CORVUS CORAX RUFICOLLIS)*: I. METABOLIC RATE, EVAPORATIVE WATER LOSS AND BODY TEMPERATURE OF THE RAVEN EXPOSED TO HEAT STRESS. *Comp. Biochem. Physiol. A Comp. Physiol.* 45(2): 421-430, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 75*
[Univ. Jerusalem, Jerusalem, Israel.]

Marder, Jacob. BODY TEMPERATURE REGULATION IN THE BROWN-NECKED RAVEN *(CORVUS CORAX RUFICOLLIS)*: II. THERMAL CHANGES IN THE PLUMAGE OF RAVENS EXPOSED TO SOLAR RADIATION. *Comp. Biochem. Physiol. A Comp. Physiol.* 45(2): 431-440, illus. 1973. [From Biol. Abstr. 56(9), 1973.] *WR 151: 75*
[Univ. Jerusalem, Jerusalem, Israel.]

McLaren, Peter L. PHYSICAL COMBAT IN THE BROWN-HEADED COWBIRD. *Wilson Bull.* 85(3): 342-343. Sept. 1973. *WR 151: 75*
[Univ. Toronto, Toronto, Ontario, Canada.] Two brown-headed cowbirds *(Molothrus ater)* engaged in combat during the nesting season.--Courtesy/ Paul A. Stewart.

Morgan, P. A., and P. E. Howse. AVOIDANCE CONDITIONING OF JACKDAWS *(CORVUS MONEDULA)* TO DISTRESS CALLS. *Anim. Behav.* 21(3): 481-491, 3 figs. Aug. 1973. *WR 151: 75*
[Univ. Southampton, Southampton, England.] Abstract: Jackdaws were conditioned to avoid or escape broadcast jackdaw distress calls. The calls were preceded by 10 s of stimulus light which accompanied the broadcast calls for 4 min. Following this, there was a 2-min time-out period without light or sound, after which the stimulus light was illuminated once again. A response (key peck) during the light or light plus sound periods terminated these. Extinction was accomplished with the stimulus light only. Median latencies of response were compared when calls were broadcast using high and low fidelity equipment. Median latencies to the HF calls were significantly shorter than those to LF calls. A comparison was also made between HF calls and discrete 1 kHz tone segments. The median latencies for the tone segments were longer than those for HF calls. HF jackdaw calls were compared with high pass calls (containing only frequencies above 5 kHz) and with HF herring gull distress calls. In both cases, the median response latencies were similar to those for HF jackdaw calls.

Naik, N. L. WING PTERYLOGRAPHY OF SOME STARLINGS. *Pavo Indian J. Ornithol.* 8(1/2): 45-74, illus. 1970 (1972). [From Biol. Abstr. 56(6), 1973.] *WR 151: 75*
[Jethabhai Jhaverbhai Coll. Sci., Nadiad, Gujarat, India.] The 11 spp. of starlings representing 6 genera *(Aplonis, Lamprotornis, Spreo, Sturnus, Acridotheres,* and *Gracula)* were examined, using various methods of pterylography.

Neal, Charles M. COOLING RATES AND DEVELOPMENT OF HOMEOTHERMY IN THE BROWN-HEADED COWBIRD *(MOLOTHRUS ATER ATER)*. *Condor* 75(3): 351-352, 1 fig. Autumn 1973. *WR 151: 75*
[Ohio State Univ., Columbus.] Nestling cowbirds started to develop temperature control when four days old; they were homeothermic when ten days old.--Courtesy/ Paul A. Stewart.

Neweklowsky, Waltraud. UNTERSUCHUNGEN UEBER DIE BIOLOGISCHE BEDEUTUNG UND DIE MOTIVATION DER ZIRKELBEWEGUNG DES STARS *(STURNUS V. VULGARIS* L.). [ON THE BIOLOGICAL IMPORTANCE AND MOTIVATION OF "ZIRKEIN" IN STARLINGS.] *Z. Tierpsychol.* 31(5): 474-502, illus. 1973. [From Biol. Abstr. 56(7), 1973. In German with English summ.] *WR 151: 75*
[Straubst. 9, Solbad Hall, Austria.]

Reese, Jan G. RED-WINGED BLACKBIRD FEEDING ON HORSESHOE CRAB EGGS. *Wilson Bull.* 85(4): 483. Dec. 1973. *WR 151: 75*
[St. Michaels, Md.] *"Agelaius phoeniceus."*--Courtesy/ Paul A. Stewart.

Robertson, Raleigh J. OPTIMAL NICHE SPACE OF THE REDWINGED BLACKBIRD: SPATIAL AND TEMPORAL PATTERNS OF NESTING ACTIVITY AND SUCCESS. *Ecology* 54(5): 1085-1093, 4 figs. Late Summer 1973. *WR 151: 76*

[Queen's Univ., Kingston, Ontario, Canada.] Nesting colonies of red-winged blackbirds *(Agelaius phoeniceus)* were larger, more synchronous, and of longer duration in marsh than in upland habitat. Associated with these other parameters, marsh colonies suffered a lower rate of predation.--From abstr. Courtesy/ Paul A. Stewart.

Rowley, Ian. THE COMPARATIVE ECOLOGY OF AUSTRALIAN CORVIDS. I. INTRODUCTION, STUDY AREAS, AND METHODS OF STUDY. *CSIRO Wildl. Res.* 18(1): 1-23, 21 figs. Oct. 1973. *WR 151: 76*

[CSIRO, Helena Valley, Western Australia.] Abstract: Five species of *Corvus* are found in Australia. At one time or another these omnivores impinge on agriculture in the role of pest, scavenger, or eater of injurious insects. To evaluate their true role, the ecology of these superficially very similar species was studied between 1961 and 1969. This paper introduces a series of five papers on the comparative ecology of the Australian corvids; it describes the areas where the work was done and the methods used.

Rowley, Ian. THE COMPARATIVE ECOLOGY OF AUSTRALIAN CORVIDS. II. SOCIAL ORGANIZATION AND BEHAVIOUR. *CSIRO Wildl. Res.* 18(1): 25-65, 14 figs. Oct. 1973. *WR 151: 76*

[CSIRO, Helena Valley, Western Australia.] The five species of Australian *Corvus* are all slow to mature and probably do not breed before they are 3 yr old; immature birds live in nomadic flocks which may, at times, form mixed-species feeding aggregations. Breeding pairs of these species either adopt permanent solitary territories forming a mosaic over the habitat *(C. coronoides, C. orru,* or *C. tasmanicus)* or breed semi-colonially, quite close together, whilst feeding in assemblies at some other place *(C. mellori* and *C. bennetti).* No Australian corvid has developed the colonial-nesting habit.--From concl.

Rowley, Ian, L. W. Braithwaite, and G. S. Chapman. THE COMPARATIVE ECOLOGY OF AUSTRALIAN CORVIDS. III. BREEDING SEASONS. *CSIRO Wildl. Res.* 18(1): 67-90, 8 figs. Oct. 1973. *WR 151: 76*

[CSIRO, Helena Valley, Western Australia.] Conclusion: Australian corvids tend to breed in the winter and spring, except for *C. orru,* which breeds in the summer in the tropics. The larger, resident species have more regular cycles than the two smaller, nomadic species.

Rowley, Ian. THE COMPARATIVE ECOLOGY OF AUSTRALIAN CORVIDS. IV. NESTING AND THE REARING OF YOUNG TO INDEPENDENCE. *CSIRO Wildl. Res.* 18(1): 91-129, 20 figs. Oct. 1973. *WR 151: 76*

[CSIRO, Helena Valley, Western Australia.] Conclusions: The main differences in the nesting biology of the Australian corvids lies in character divergence of sympatric pairs. The larger resident species are in no particular hurry to complete their reproductive cycle and discharge their young. However, the smaller nomads, which are subordinate where sympatry occurs, have adapted to a very brief sedentary nesting period and fledge their young directly into mobile foraging flocks, thus minimizing the chances of conflict with their larger congeners.

Rowley, Ian, and W. J. M. Vestjens. THE COMPARATIVE ECOLOGY OF AUSTRALIAN CORVIDS. V. FOOD. *CSIRO Wildl. Res.* 18(1): 131-155, 7 figs. Oct. 1973. *WR 151: 76*

[CSIRO, Helena Valley, Western Australia.]

Rowley, Ian. THE COMPARATIVE ECOLOGY OF AUSTRALIAN CORVIDS. VI. WHY FIVE SPECIES? *CSIRO Wildl. Res.* 18(1): 157-169, 4 figs. Oct. 1973. *WR 151: 76*

[CSIRO, Helena Valley, Western Australia.] Conclusion: Australia has five species of corvid, three of which are completely resident when mature, whilst the remaining two species are nomadic except for the briefest possible time

needed to nest and rear young. The only corvid in Tasmania is *C. tasmanicus*; only relict populations of this species persist on the mainland. The other four species are considered to fall into two pairs--a tropical and a temperate--each consisting of a resident and a nomadic species. *C. bennetti*, the tropical nomad, has developed into a desert-adapted species.

Stepney, P. H. R., and Dennis M. Power. ANALYSIS OF THE EASTWARD BREEDING EXPANSION OF BREWER'S BLACKBIRD PLUS GENERAL ASPECTS OF AVIAN EXPANSIONS. *Wilson Bull.* 85(4): 452-464, 2 figs. Dec. 1973. *WR 151: 77*
[Univ. Toronto, Toronto, Ontario, Canada.] Correlated with man's removal of the forest, the Brewer's blackbird *(Euphagus cyanocephalus)* has extended its breeding range 700 miles eastward during the past 60 years.--From summ. Courtesy/ Paul A. Stewart.

Stewart, Paul A. BASIS FOR PRE-ROOST GATHERINGS OF STARLINGS AND BROWN-HEADED COWBIRDS. *Bird-Banding* 44(4): 315-316. Autumn 1973. *WR 151: 77*
[203 Mooreland Dr., Oxford, N.C.] Starlings *(Sturnus vulgaris)* and brown-headed cowbirds *(Molothrus ater)* assembled near the roosting site but delayed entry until the site to be used for the night was chosen by common grackles *(Quiscalus quiscula)*.

Stewart, Paul A. STARLINGS EAT LARVAE ON CORN EARS WITHOUT EATING CORN. *Auk* 90(4): 911-912, 1 fig. Oct. 1973. *WR 151: 77*
[203 Mooreland Dr., Oxford, N.C.] *"Sturnus vulgaris."*

Voigts, David K. FOOD NICHE OVERLAP OF TWO IOWA MARSH ICTERIDS. *Condor* 75 (4): 392-399, 1 fig. Winter 1973. *WR 151: 77*
[Ecological Services Group, Texas Instruments, Inc., R.F.D. 4, Ulster Landing Rd., Saugerties, N.Y.] Aquatic insects were important foods for nestling red-winged and yellow-headed blackbirds *(Agelaius phoeniceus* and *Xanthocephalus xanthocephalus)*. Diets responded to the changing rate of odonate emergence as the nesting season progressed. Terrestrial foods were used more when odonate emergence rates were low.--Courtesy/ Paul A. Stewart.

Wauer, Roland H. BRONZED COWBIRD EXTENDS RANGE INTO THE TEXAS BIG BEND COUNTRY. *Wilson Bull.* 85(3): 343-344. Sept. 1973. *WR 151: 77*
[Natl. Park Serv., Box 278, Santa Fe, N. Mex.] *"Tangavius aeneus."*--Courtesy/ Paul A. Stewart.

Wright, E. N. EXPERIMENTS TO CONTROL STARLING DAMAGE AT INTENSIVE ANIMAL HUSBANDRY UNITS. *Bull. OEPP (Organ. Eur. Mediter. Prot. Plant)* 9. p. 85-89. 1973. [From Biol. Abstr. 56(7), 1973. In English with French summ.] *WR 151: 77*
[Pest Infest. Control Lab., Worplesdon, England.] *"Sturnus vulgaris."*

OTHER BIRDS

Ambedkar, V. C. ON THE BREEDING BIOLOGY OF THE BLACK-THROATED *(PLOCEUS BENGHALENSIS* LINNAEUS) AND THE STREAKED *(PLOCEUS MANYAR FLAVICEPS* LESSON) WEAVER-BIRDS IN THE KUMAON TERAI [INDIA]. *J. Bombay Nat. Hist. Soc.* 69(2): 268-282, illus. 1972. [From Biol. Abstr. 56(6), 1973.] *WR 151: 77*

Andrews, M. I., and R. M. Naik. THE BIOLOGY OF THE JUNGLE BABBLER. *Pavo Indian J. Ornithol.* 8(1/2): 1-34, illus. 1970 (1972). [From Biol. Abstr. 56(6), 1973.] *WR 151: 77*
[Mar Thoma Coll., Tiruvalla, Kerala, India.] *"Turdoides striatus."*

Dickerman, Robert W. A REVIEW OF THE WHITE-BREASTED WOODWRENS OF MEXICO AND CENTRAL AMERICA. *Condor* 75(3): 360-361. Autumn 1973. *WR 151: 77*
[Cornell Univ. Med. School, 1300 York Ave., New York, N.Y.] *"Henicorhina leucosticta."*--Courtesy/ Paul A. Stewart.

OTHER BIRDS--Continued

Diehl, Barbara, and Andrzej Myrcha. BIOENERGETICS OF NESTLING RED-BACKED SHRIKES *(LANIUS COLLURIO)*. *Condor* 75(3): 259-264, 4 figs. Autumn 1973. *WR 151: 78*

[Polish Acad. Sci., Dziekanów Leśny, Poland.] "The cumulative energy balance of an average brood size of five nestlings throughout the nestling period, expressed in Kcal/5 nestlings/15 days, was: production, 194.3; metabolism, 483.4; assimilation, 677.7; assimilation coefficient, 70%; and consumption, 968.1. This consumption is equivalent to about 600g of fresh food."--Courtesy/ Paul A. Stewart.

Easterla, David A., and Ronald E. Ball. THE ROCK WREN IN MISSOURI. *Wilson Bull.* 85(4): 479-480. Dec. 1973. *WR 151: 78*

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REPTILES & AMPHIBIANS

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Manuscript for this issue was completed 16 May 1974

★ U. S. GOVERNMENT PRINTING OFFICE: 1974 O - 548-495

616.7A

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